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INTERNATIONAL S.A.

CH-1450 STE - CROIX / SUISSE

SERVICE APRES-VENTE BOLEX

AFTER-SALES SERVICE

KUNDENDIENST

# PIECES DE RECHANGE ET INSTRUCTIONS TECHNIQUES
# ERSATZTEILE UND TECHNISCHE ANLEITUNGEN
# SPARE PARTS AND SERVICE INSTRUCTIONS

CAMERAS
KAMERAS **H16EBM** **300 401 →**
CAMERAS

H3

EDITION 1971

# INTRODUCTION | Keeping the catalog up-to-date | BOLEX

You are requested to file in this service manual all the corresponding printed matters which you will receive henceforward and to check the information contained therein whenever you wish to compile a spare parts order.

All technical documentation is supplied to your service department on a loan basis and must by no means be handed over to third parties.

BOLEX INTERNATIONAL S.A.
After-Sales Service

CH-1450 Ste-Croix / Switzerland

Every document of this catalogue is composed of numbered "boxes" respectively "columns" containing the following information :

Box No. 1 : The type of document, i.e.

TM = index : white paper

INTRODUCTION : white paper

PD = spare parts sheet : white paper

IT = technical instructions : salmon-pink paper

FM = modification sheet : blue paper.

Filing order :
IT are filed after the corresponding spare parts sheets. If there are several versions of the same subject, additional PD may be issued. If no special IT are elaborated, the technical instructions belonging to the original PD are also valid for the additional PD.

FM are filed so as to face the corresponding PD or IT, according to the indication in box 9. **

Box No. 2 : The name of the subject treated.

Box No. 3 : The product to which the treated subject belongs.

Box No. 4 : The serial number indicating the introduction of the subject treated. (Approx.)

Box No. 5 : The trade mark of the manufacturer.

Box No. 6 : The name of the catalogue (see also label on back of folder).

Box No. 7 : The issuing date of the document.
Filing order :
- INTRODUCTION sheets : Of all the INTRODUCTION sheets bearing the same indications in boxes 1 - 6 - 11, only the sheet with the latest issuing date must be kept.

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- TM, PD and IT : Of all the sheets bearing the same indications in boxes 1 - 6 - 10 - 11 (1 - 6 for TM), only the sheet with the latest issuing date must be kept.
  ATTENTION : When discarding a superseded sheet, be sure that the corresponding FM are eliminated at the same time !
- FM : Of all the FM bearing the same indications in boxes 1 - 6 - 9 - 11, only the sheet with the latest issuing date must be kept.

Box No. 8 : The language in which the document is printed :

* = trilingual

F = French

D = German

E = English.

Box No. 9 : Space reserved for special indications.

On the FM, this space contains the specifications in box 1 - 10 - 11 - 7 of the PD or IT for which the FM is valid.

Box No. 10 : Letter of tab under which the PD and IT are filed.

On the IT this section is devided into two parts, the lower showing the page number of the PD whereafter the IT are filed.

Box No. 11 : The page number.

Filing order :

- TM, INTRODUCTION sheets, PD and FM : Arabic numerals in numerical order.
- IT : Roman numerals in numerical order.

Box No. 12 :
- On INTRODUCTION sheets : miscellaneous
- On PD : "exploded view" drawings with part numbers
- On IT : text.

Box No. 13 : Sketches illustrating the technical instructions.

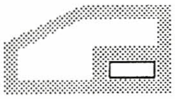
Column No. 15 : The number of the respective modification.

Column No. 16 : The old parts, valid before the introduction of the modification.

Column No. 17 : The new parts, valid after the introduction of the modification.

Column No. 18 : Explanatory notes.

**) On receipt of a FM, you should rectify immediately the corresponding document.

| Sign | Signification |
|---|---|
| | As a rule, compound parts which have only one or no symbol at all, cannot be dismantled. Their components are, consequently, not available separately. |
| $\boxed{.......}$ | Design available. |
| (.......) | Part not available. |
| (.......†) | Superseded design. Available as stock lasts. |
| (.......☠) | Faulty parts, to be returned for exchange. Cheap parts may be destroyed.<br>Moreover, this sign constrains the repairman to fit the new version on any apparatus equipped with the old one, no matter for which reason the apparatus is submitted to him. |
| (.......) * | Available for fully equipped service stations. |
|  | Parts appearing in the dotted field are available as an assembly.<br>The respective reference is to be found in a corner of the field. |
| ...X $\boxed{.......}$ | Quantity of identical parts going with the assembly. |
| ○ $\boxed{.......}$ | ○ = numbering of the designs (to designate interchangeability). |
| ○ $\boxed{.......}$ I 2/1 & 3 | Part interchangeable.<br>Design ② may be fitted instead of ① and ③. |
| ○ $\boxed{.......}$ NI 1/2 | Part not interchangeable.<br>Design ① cannot be mounted instead of ②. |
| ○ $\boxed{.......}$ NI 2/1;<br>I 2/3 | Design ② is not interchangeable with ① but with ③. |
| $\boxed{.......}$ d=...<br>e=... | Mechanical characteristics (thickness, diameter, size, length, appearance, colour, etc...) enabling you to distinguish the old version from the new one. |

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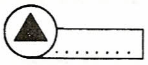
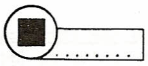
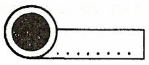
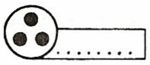
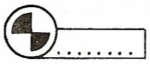
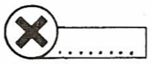
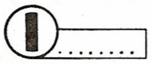
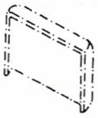
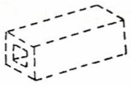
| | |
|---|---|
| →[ ] | The bracketed parts make the new version interchangeable with the former one. |
| [.......] z=... | Number of teeth of a gear. |
| [.......] (N) | Parts to be mounted according to need (for adjustment). |
| → No. ....... | Design valid up to serial number. |
| No. .......→ | Design valid from serial number. |
|  | Symbol of grease to be applied. |
|  | Symbol of oil to be applied. |
|  | Symbol of glue to be used. |
|  | Symbol of paint to be applied. |
|  | Symbol of mastic to be applied. |
|  | Symbol of thinner to be applied. |
|  | Symbol of solid lubricant to be applied. |
|  | Part shown on another page or in another catalogue. |
|  | Part not available.<br>If shown in a screened area it will be included in the corresponding assembly. |

The above mentioned signs do not belong to the spare parts number and may, therefore, be omitted when placing an order.

F) Code de couleurs des fils électriques et gaines isolantes.

D) Farbcode für elektrische Drähte und Isolierhüllen.

E) Colour code for electric wires and insulating tubing.

| Code | Couleur / Farbe / Colour |
|---|---|
| ⓐ | Jaune / Gelb / Yellow |
| ⓑ | Noir / Schwarz / Black |
| ⓒ | Rouge / Rot / Red |
| ⓓ | Vert / Grün / Green |
| ⓔ | Blanc / Weiss / White |
| ⓕ | Bleu / Blau / Blue |
| ⓖ | Orange / Orange / Orange |
| ⓗ | Beige / Beige / Beige |
| ⓙ | Rose / Rosa / Pink |
| ⓚ | Violet / Violett / Purple |
| ⓛ | Brun / Braun / Brown |
| ⓜ | Gris / Grau / Grey |
| ⓝ | Non isolé<br>Nicht isoliert<br>Not insulated |
| ⓞ | Aluminium (gainage transparent)<br>Aluminium (durchsichtige Isolation)<br>Aluminium (transparent insulation) |
| ⓟ | Cuivre (gainage transparent)<br>Kupfer (durchsichtige Isolation)<br>Copper (transparent insulation) |

F) Afin d'en faciliter la lecture, nous vous recommandons de retracer sur les plans de câblage les fils avec leur couleur correspondante.

D) Wir empfehlen Ihnen, zwecks besserer Lesbarkeit die Drähte auf den Verdrahtungsschema mit den entsprechenden Farben nachzuziehen.

E) For better intelligibility it is recommended to trace the wires on the wiring diagrams with their respective colours.

**TM**

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**BOLEX**

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| B | Viseur réflexe | Reflex Sucher | Reflex Viewfinder |
| C | Boîtier - gaînage | Kameragehäuse-Belederung | Camera body-Leathering |
| D | Couvercle-gaînage<br>Manivelle | Deckel-Belederung<br>Aufzugskurbel | Lid-Leathering<br>Rewinding handel |
| E | Platine supérieure | Obere Werkplatte | Upper base plate |
| F | Griffe-volet presseur<br>Obturateur | Greifer-Filmandruckplatte<br>Sektorenblende | Claw-Pressure pad<br>Rotary shutter |
| G | Mécanisme-moteur | Mechanismus-Motor | Mechanism-Motor |
| H | Circuits électroniques | Elektronische Schaltungen | Electronic circuits |
| J | Poignée | Handgriff | Grip |
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| N | Cotes | Masse | Dimensions |

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**PD**

# Porte-objectif
# Objektivhalter
# Lens Holder

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300 401 ⟶

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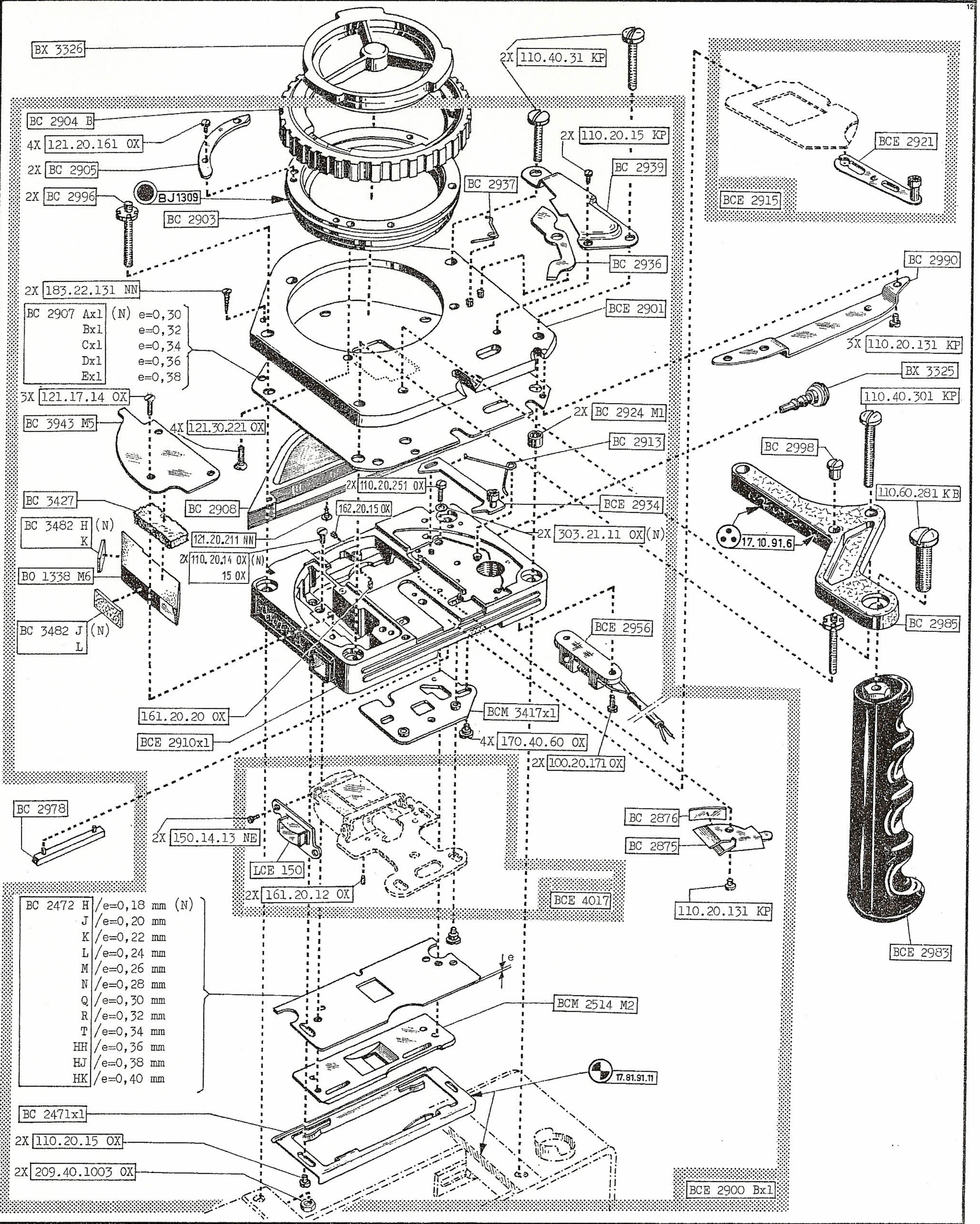
BX 3326
BC 2904 B
4X 121.20.161 0X
2X BC 2905
2X BC 2996
BJ1309
BC 2903
2X 183.22.131 NN
BC 2907 Axl (N) e=0,30
Bxl e=0,32
Cxl e=0,34
Dxl e=0,36
Exl e=0,38
3X 121.17.14 0X
BC 3943 M5
4X 121.30.221 0X
BC 3427
BC 3482 H (N)
K
BO 1338 M6
BC 3482 J (N)
L
BC 2908
2X 110.20.251 0X
162.20.15 0X
121.20.211 NN
2X 110.20.14 0X (N)
15 0X
161.20.20 0X
BCE 2910xl
2X 110.40.31 KP
2X 110.20.15 KP
BC 2939
BC 2937
BC 2936
BCE 2901
2X BC 2924 M1
BC 2913
BCE 2934
2X 303.21.11 0X (N)
BCE 2956
BCM 3417xl
4X 170.40.60 0X
2X 100.20.171 0X
BCE 2921
BCE 2915
BC 2990
3X 110.20.131 KP
BX 3325
110.40.301 KP
BC 2998
110.60.281 KB
17.10.91.6
BC 2985
BC 2978
2X 150.14.13 NE
LCE 150
2X 161.20.12 0X
BCE 4017
BC 2876
BC 2875
110.20.131 KP
BCE 2983
BC 2472 H /e=0,18 mm (N)
J /e=0,20 mm
K /e=0,22 mm
L /e=0,24 mm
M /e=0,26 mm
N /e=0,28 mm
Q /e=0,30 mm
R /e=0,32 mm
T /e=0,34 mm
HH /e=0,36 mm
HJ /e=0,38 mm
HK /e=0,40 mm
e
BCM 2514 M2
17.81.91.11
BC 2471xl
2X 110.20.15 0X
2X 209.40.1003 0X
BCE 2900 Bxl

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**A** **1**

## 1. Lens holder

Use support BJ 133 for all mounting proceedings of the lens holder.
Important : All lens elements, the prism and their seatings must be cleaned scrupulously, as the slightest particle of dust or finger prints appear greatly magnified in the viewfinder.

### 1.1 Collecting lenses (fig. 1)

Using BJ 579, carefully lift up lenses (a) at their base and remove with BJ 114. In case of lens replacements, calibre with BJ 583 the diameter of the nylon wedges to be used for a correct fastening in the seatings.

### 1.2 Film gate (fig. 2)

For the mounting and the centering of both film gate and wedge onto the lens holder, use support BJ 1569 with gauge BJ 837 at its top. Film gate (c) is positioned through the 3 pins (g) and centered by the window on cylinder (f). Set wedge (d) and lens holder (e) guided by the 4 pins of gauge and support; tighten the 4 screws (h). The outer edges of wedge (d) must come flush with the bearing surface of the film gate.

### 1.3 Transport prism (fig. 3)

Introduce prism (j) in its seating with the chamfered edge above and select wedges (k) and (l) which must provide no play at the fixing. If the thickest wedges are still insufficient, stick a small piece of black self-adhesive tape at the place marked by the arrow. Use tool BJ 114 for driving out the wedges.

### 1.4 Reflex prism (fig. 4)

The mounting and dismantling of the reflex prism (m) may be effected when the lower plate (o) has been removed, since the space available to carry out such works is very limited.
Lift up prism (m), engage the retaining wedge BJ 581 and close the prism against BJ 581.
Carefully introduce prism assembly (m) without scratching same.
Put up prism (m) and remove BJ 581.
Shift the lower plate (o) under the hinge plate (n) and screw the 4 screws (p) without tightening.

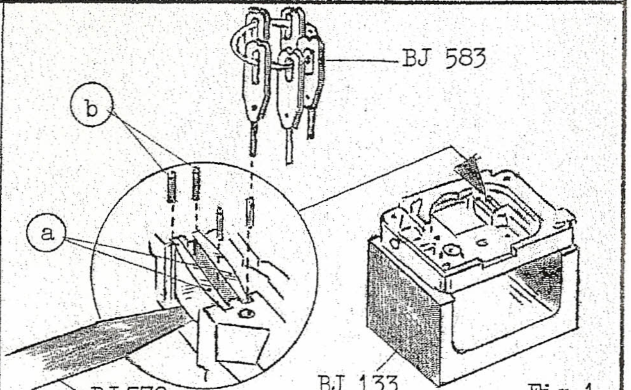

Fig.1

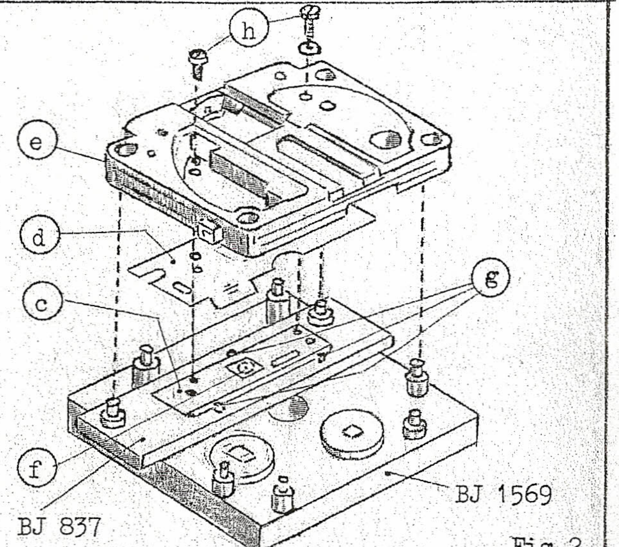

Fig.2

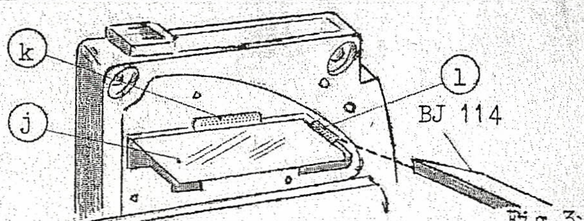

Fig.3

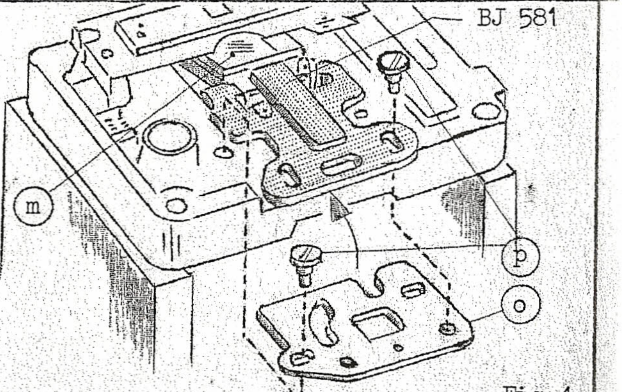

Fig.4

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## 2. Optical flange focal distance

State of the lens holder as per fig. 5 with gate (a), a shim plate (b) of medium thickness (for instance e = 0,30 mm), a spacer (k) of medium thickness and the reflex prism (c) mounted.

### 2.1 Preparation as per fig. 6

Fit the lens holder onto support BJ 811 with the 2 screws and nuts BJ 811 E. Place mirror BJ 1597 opposite the gate window and retain it with spring (d). Switch on the autocollimator to position 1 (min. light intensity). Center the gate window with respect to the autocollimator axis. Slide the autocollimator lens to about 25 cm from the lens holder, adjusting the vernier scale to 0.

Horizontal adjustment : Adjust the angular position of support BJ 811 so that the luminous line appears diametrically in the eyepiece, fig. 7.1, position A.

Vertical adjustment : Loosen screw (f) and turn screw (e) with a view to bringing the lens holder into its vertical plane

### 2.2 Parallel adjustment of the prism

Put up the reflex prism and remove mirror BJ 1597. Loosen screw (h) and set the prism parallel with respect to the gate by acting on screw (j) and on the 2 screws (l). The position of the prism is correct once the luminous line is visible in the eyepiece as per position A, but positions B and C, fig. 7.2, are still acceptable.

These adjustments precede the adjustment of the flange focal distance and may be rectified while adjusting the flange focal distance of the ground glass screen of the prism.

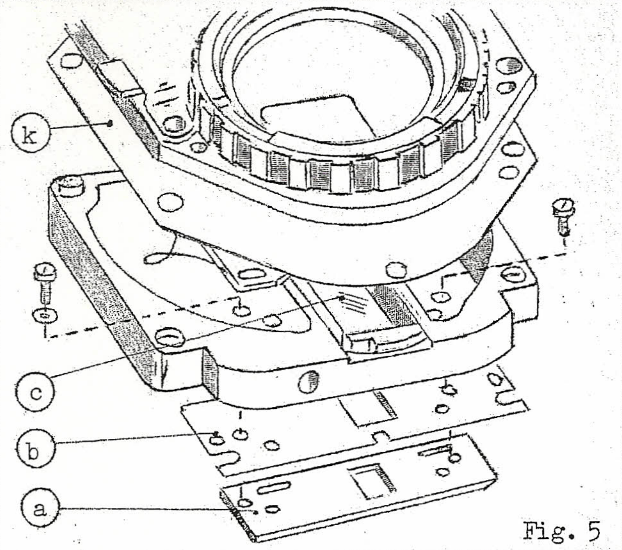

Fig. 5

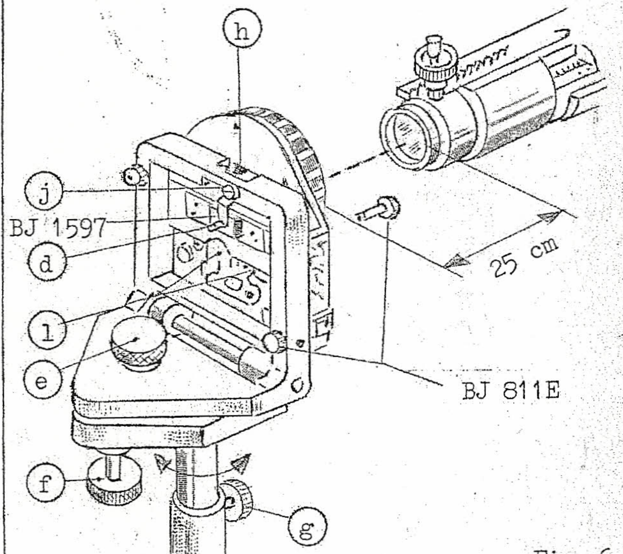

Fig. 6

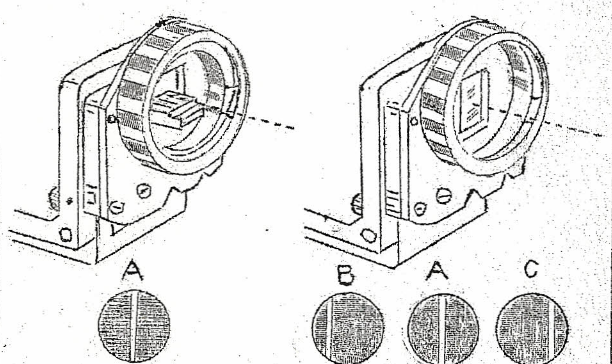

Fig. 7.1 Fig. 7.2

Fig. 7

### 2.3 Adjusting the optical flange focal distance

Preparation as per fig. 8.
Fit the calibration lens BJ 151 and the bayonet support BJ 1310 to the lens holder. Switch on the autocollimator to position 1 (min. light intensity). Slide the autocollimator tube so that the line seen in the eyepiece has the maximum of contrast, illustration D. Note the difference with respect to the zero of the vernier. This figure, read in mm on the vernier, indicates the value in 0.01 mm by which the thickness of the shims previously used must be varied, so as to obtain the following readings on the vernier scale :

$\boxed{0 \pm 2 \text{ divisions}} = \pm 0.02$ mm

### 2.4 Adjusting the flange focal distance of the ground glass prism

Remove mirror BJ 1597 and switch on the autocollimator to position 2 (max. light intensity).
Act in reverse order on screw (j) and on screws (l) so as to maintain the parallelism of the prism and to bring the flange focal distance of the ground glass to

$\boxed{\pm 2 \text{ divisions}} = \pm 0.02$ mm

of the reading noted under paragraph 2.3.

Screws (l) to be screwed and (j) blocked through tightening of screw (h).

### 2.5 Framing

Preparation as per fig. 9, light source at (m).
Focus the magnifying glass BJ 810 on the edges of the prism aperture.
Center the white rectangle in the red one.
To carry out the horizontal adjustment, slightly loosen screws (n) and act with the eccentric screwdriver BJ 1594 in (o).
To carry out the vertical adjustment, slightly loosen screws (p) and act with BJ 1594 in (r). Afterwards tighten (n) and (p).
Should a small parallel defect appear between the 2 apertures, slightly loosen screw (s) and align the ground glass mask (t).

### 2.6 Film guide (fig. 10)

Gauge BJ 1500x1 must slide in the film guide, but without play. The pressure exerted by spring leaf (u) must be of :

$\boxed{50 \pm 5 \text{ g}}$

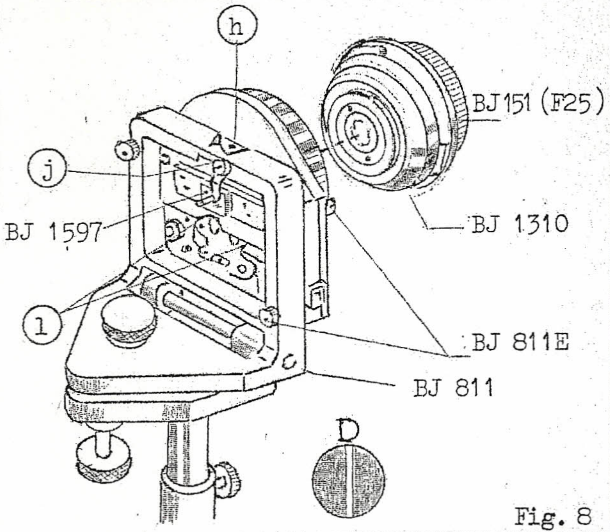

Fig. 8

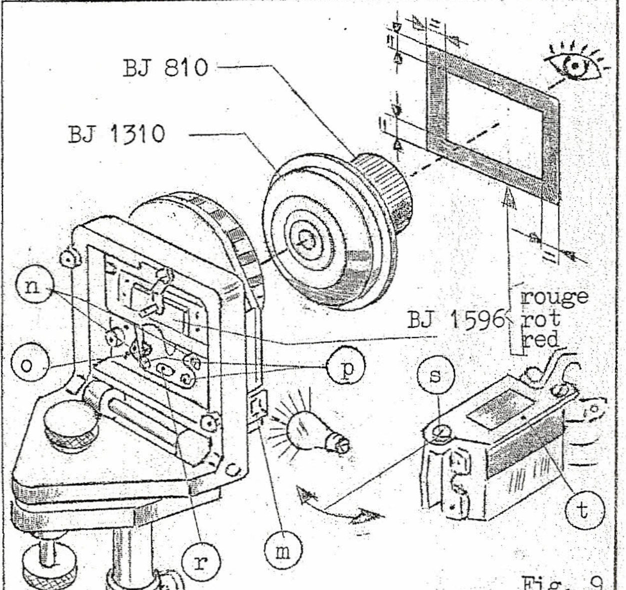

Fig. 9

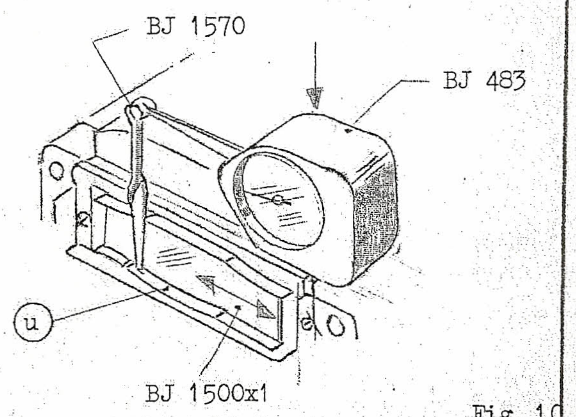

Fig. 10

3. Variable shutter (fig. 11)

Mount the variable shutter assembly (a) on the lens holder.
Select the necessary shims and spacers so that :
1) lever (b) slides freely and smoothly
2) the pile does not protrude in (c).

3.1 Adjustments

Put control lever (b) in open shutter position (red mark).
On point (x) bring the 2 shutter blades in superposition, however so that the fixed sector is retracted by 1 mm under the upper movable sector. Maintain both sectors and catch the play of the shutter control mechanism by turning the axle in the direction of the arrow. With the 4 screws, fasten the fixed shutter blade to its axle.

3.2 Adjusting the lens holder on the housing

Place pinion (d) on the VS axle as shown in fig. 12.
Fasten pinion very slightly on its axle by means of one single screw.
Mount lens holder on camera, the mechanism of which being stopped as per fig. 13.
The pinion (d) to be used must allow a slight play in the transmission.
When operating the camera frame by frame in position T and by maintaining the button on P, the shutter must stop as per fig. 14.
Remove the lens holder and tighten the 3 screws of pinion (d).
Before mounting the lens holder definitely as previously described, bring the shutter in the position shown in fig. 15. Pinion (d) turns the shutter automatically in the right position as per fig. 14.
Check the free movement of the mechanism by means of the handcrank for the backward motion.
Make sure that the shutter is adequately fastened as per fig. 14, the mechanism being stopped according to fig. 13.

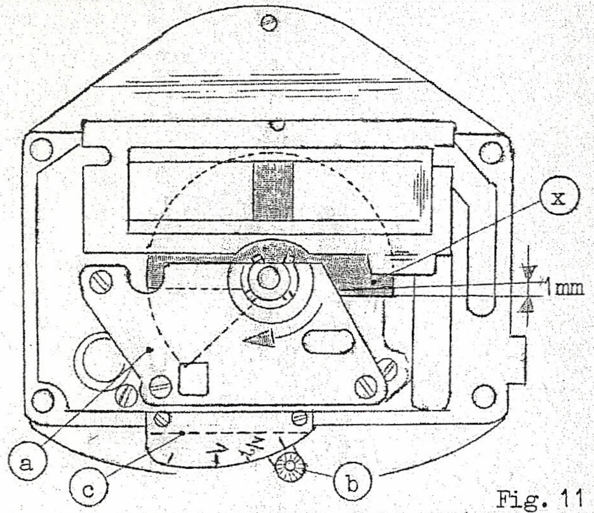

Fig. 11

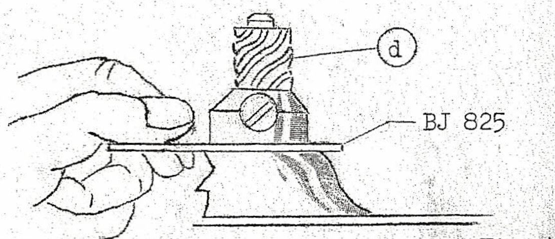

Fig. 12

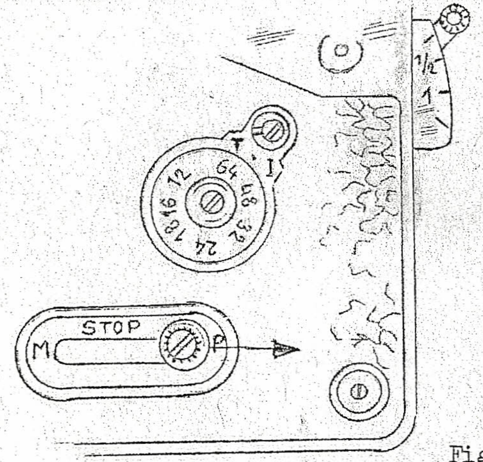

Fig. 13

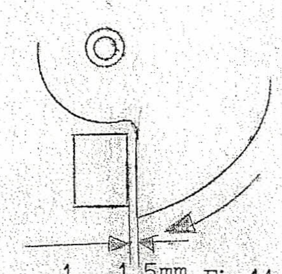

Fig.14

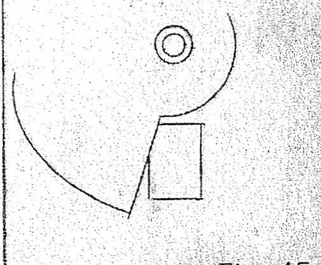
Fig. 15

**PD**

# Viseur reflexe
# Reflex-Sucher
# Reflex-Viewfinder

**H16EBM**

300 401 ⟹

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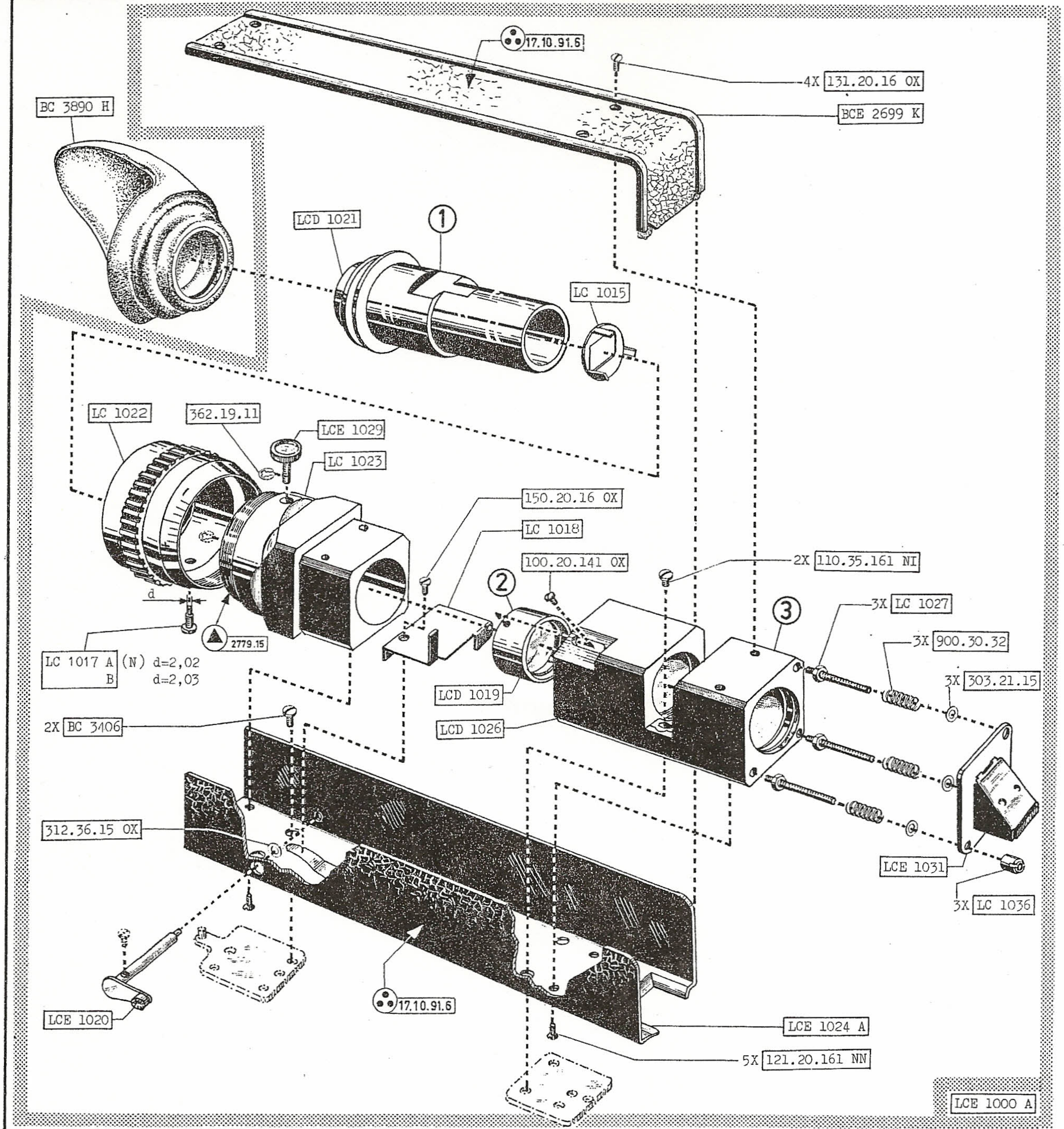
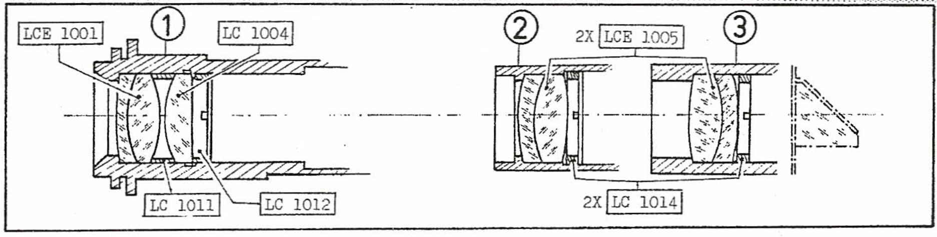


17.10.91.6
4X 131.20.16 OX
BCE 2699 K
BC 3890 H
LCD 1021
①
LC 1015
LC 1022
362.19.11
LCE 1029
LC 1023
150.20.16 OX
LC 1018
100.20.141 OX
2X 110.35.161 NI
②
③
3X LC 1027
3X 900.30.32
3X 303.21.15
d
2779.15
LC 1017 A (N) d=2,02
B d=2,03
LCD 1019
LCD 1026
2X BC 3106
312.36.15 OX
LCE 1031
3X LC 1036
LCE 1020
17.10.91.6
LCE 1024 A
5X 121.20.161 NN
LCE 1000 A



LCE 1001
①
LC 1004
LC 1011
LC 1012
②
2X LCE 1005
③
2X LC 1014

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**B**

**1**

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IT

# Reflex Viewfinder

H 16

251'501 →

BOLEX

1. Reflex viewfinder (fig. 1)

1.1 While adjusting the reflex viewfinder onto the camera housing, pin (b) must engage in the slot (a) of the eyepiece. Introduce the beak of screw (c) in the helicoidal slot of the eyepiece (a) and screw without tightening.
Center the mask inside eyepiece (a) with tool BJ 1043.
Align front prism (d) (fig. 2) by acting on the 3 screws (c) until the image reflected by the prism coincides with the mask of the eyepiece, still by maintaining a distance of 9 mm.
Mount the lid.

1.2 Adjusting the eyepiece (fig. 1)

Equip the camera with a standard lens and project a beam of parallel light rays through the lens (e.g. via a projector). Sight the eyepiece with a dioptric tube BJ 1016 which must be adequately aligned and set to infinity. Subsequently turn adjusting ring (h) until the grain of the ground glass screen appears perfectly sharp.
Turn the graduated collar (g) until the line +1 coincides with the mark of adjusting ring (h).
Tighten screws (j).

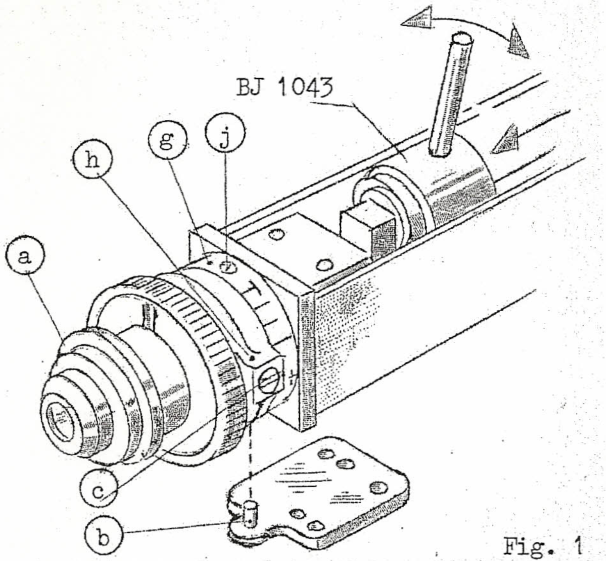

Fig. 1

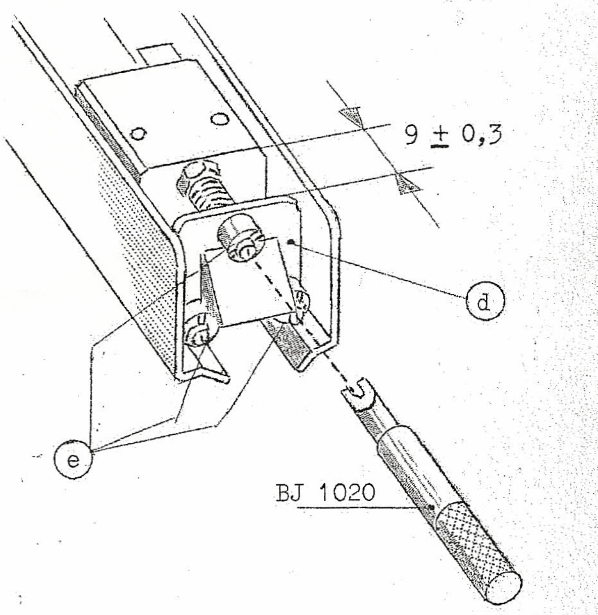

Fig. 2

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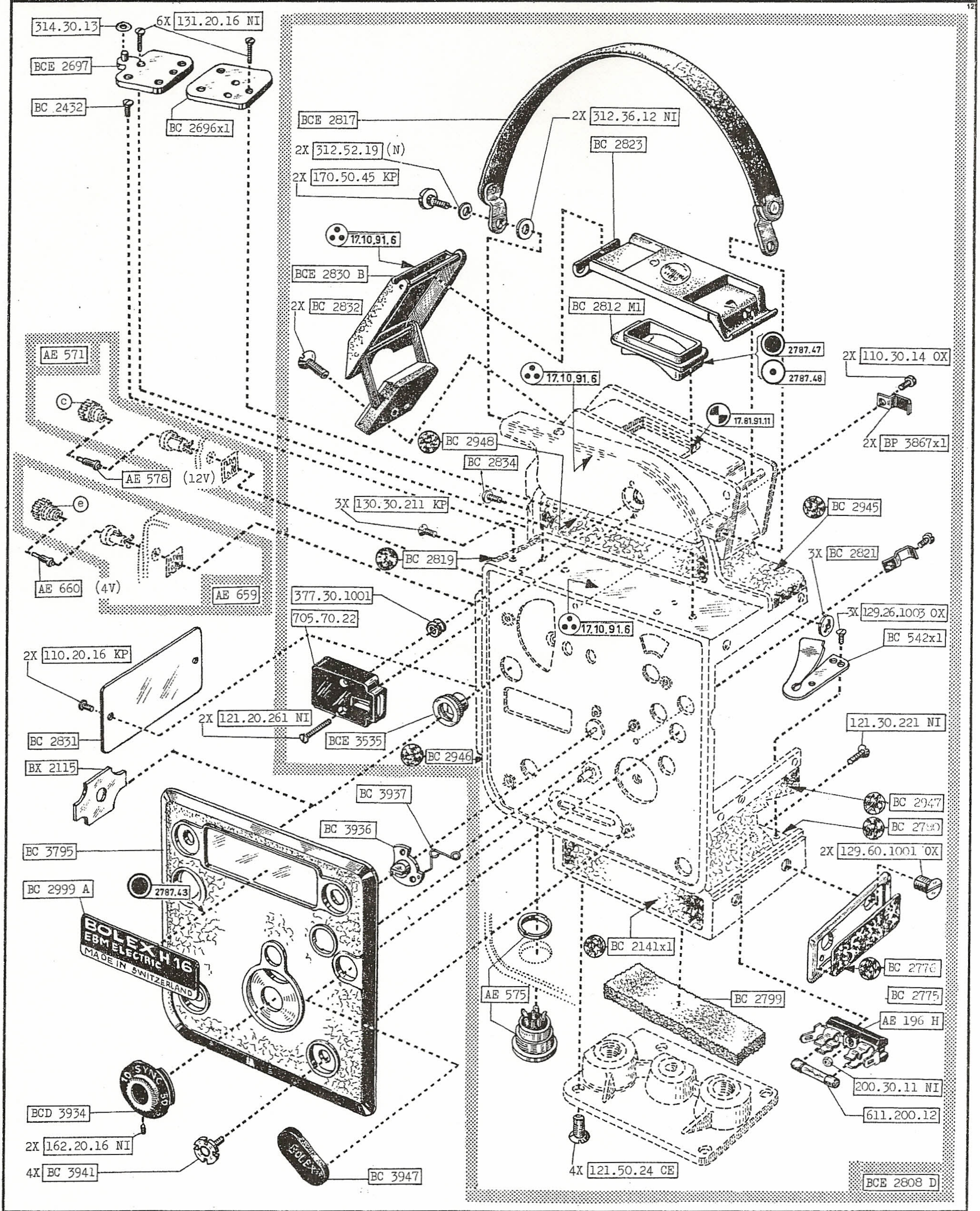
**PD**

# Boîtier
# Kameragehäuse
# Camera body

H16EBM

300 401 →

BOLEX


314.30.13
6X 131.20.16 NI
BCE 2697
BC 2432
BC 2696x1
BCE 2817
2X 312.36.12 NI
BC 2823
2X 312.52.19 (N)
2X 170.50.45 KP
17.10.91.6
BCE 2830 B
2X BC 2832
BC 2812 M1
2787.47
2787.48
2X 110.30.14 OX
17.10.91.6
17.61.91.11
2X BP 3867x1
AE 571
c
AE 578
(12V)
BC 2948
BC 2834
e
3X 130.30.211 KP
BC 2945
BC 2819
3X BC 2821
AE 660
(4V)
AE 659
377.30.1001
705.70.22
3X 129.26.1003 OX
17.10.91.6
BC 542x1
2X 110.20.16 KP
2X 121.20.261 NI
BC 2831
BCE 3535
BC 2946
121.30.221 NI
BX 2115
BC 3937
BC 2947
BC 2780
BC 3936
2X 129.60.1001 OX
BC 3795
BC 2999 A
2787.43
BOLEX H 16
EBM ELECTRIC
MADE IN SWITZERLAND
BC 2141x1
BC 2776
AE 575
BC 2799
BC 2775
AE 196 H
200.30.11 NI
611.200.12
BCD 3934
10 SYNC 50
2X 162.20.16 NI
4X BC 3941
BOLEX
BC 3947
4X 121.50.24 CE
BCE 2808 D

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▨ (F) Gaînages
(D) Belederung
(E) Leathering

● 2787.47
● 2787.48

**C**

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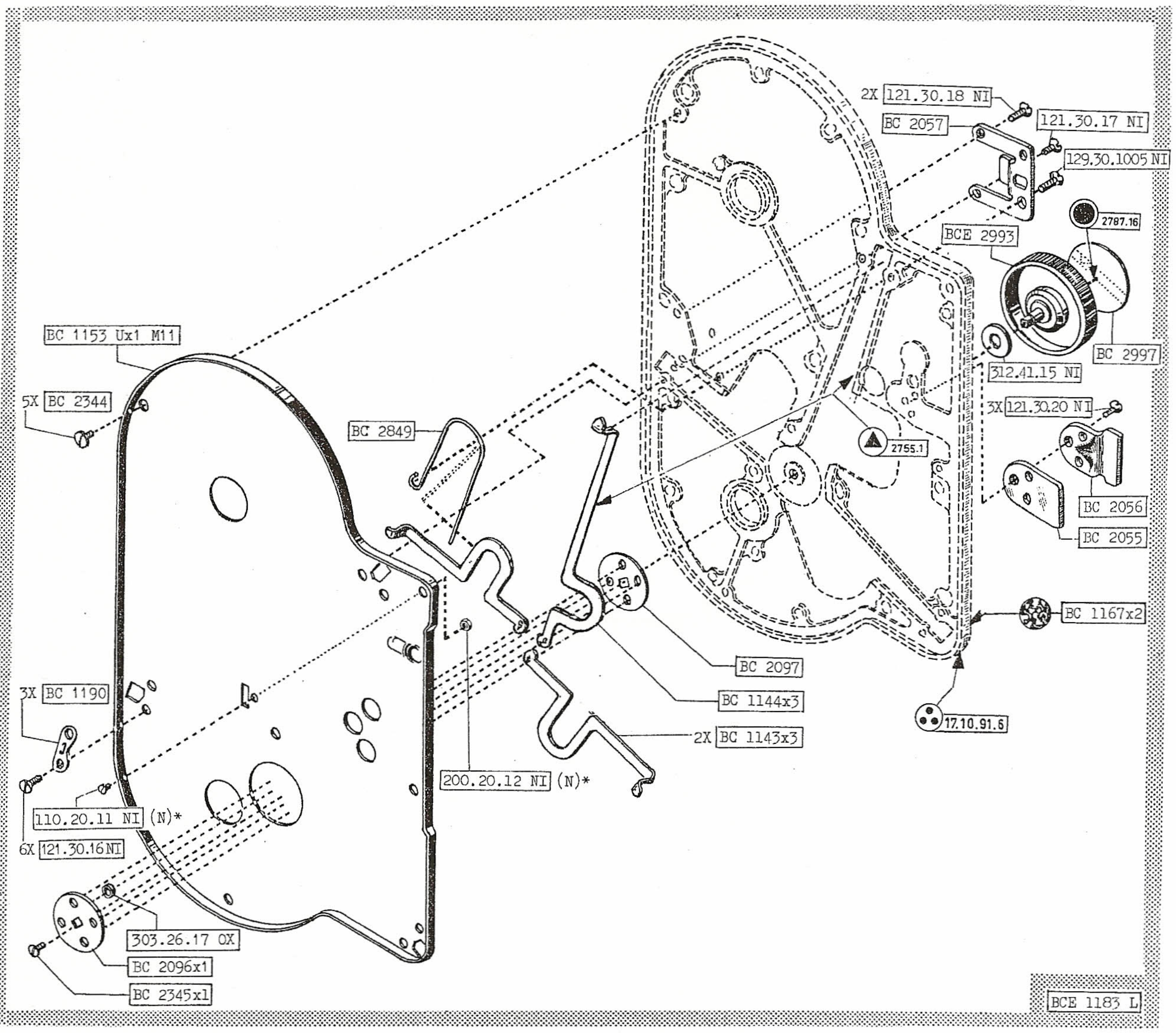
**PD**

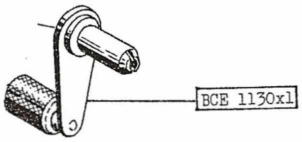
# Couvercle - Manivelle
# Deckel - Aufzugskurbel
# Lid - Rewinding handle

H16EBM

300 401 ⟹

BOLEX


2X 121.30.18 NI
BC 2057
121.30.17 NI
129.30.1005 NI
2787.16
BCE 2993
BC 2997
312.41.15 NI
3X 121.30.20 NI
2755.1
BC 2056
BC 2055
BC 1167x2
17.10.91.6
BC 2097
BC 1144x3
2X BC 1143x3
200.20.12 NI (N)*
BC 1153 Ux1 M11
5X BC 2344
BC 2849
3X BC 1190
110.20.11 NI (N)*
6X 121.30.16 NI
303.26.17 OX
BC 2096x1
BC 2345x1
BCE 1183 L



**H3**
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(F) Gaînages
(D) Belederung
(E) Leathering

2787.47
2787.48

**D** **1**

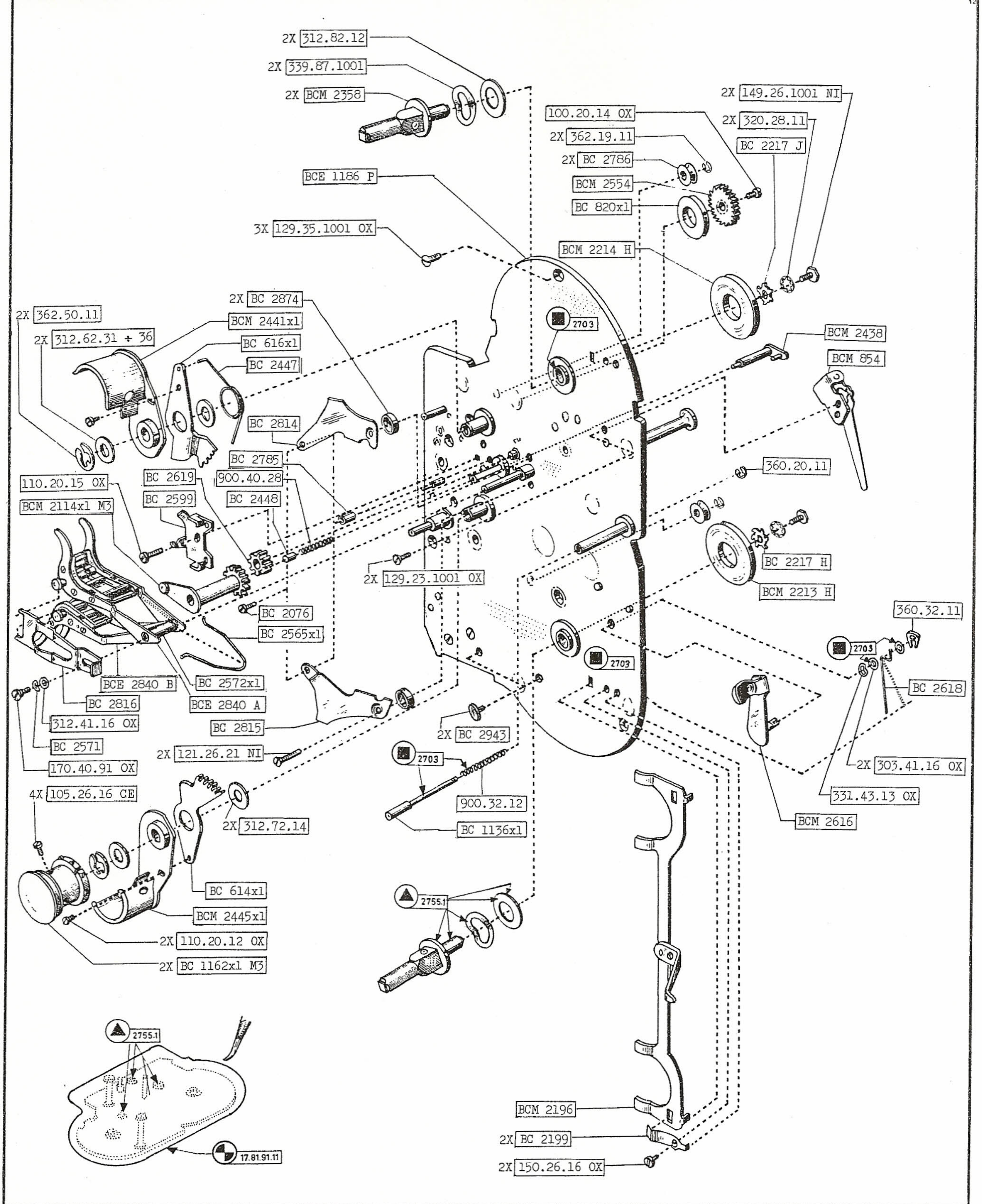
**PD**

# Platine supérieure
# Obere Werkplatte
# Upper base plate

**H16EBM**

300 401 →

**BOLEX**



2X 312.82.12
2X 339.87.1001
2X BCM 2358
2X 149.26.1001 NI
100.20.14 OX
2X 320.28.11
2X 362.19.11
BC 2217 J
2X BC 2786
BCM 2554
BC 820x1
BCE 1186 P
3X 129.35.1001 OX
BCM 2214 H
2X BC 2874
2X 362.50.11
BCM 2441x1
2X 312.62.31 ÷ 36
BC 616x1
BC 2447
2703
BCM 2438
BCM 854
BC 2814
BC 2785
BC 2619
900.40.28
110.20.15 OX
BC 2599
BC 2448
BCM 2114x1 M3
360.20.11
BC 2217 H
2X 129.23.1001 OX
BCM 2213 H
BC 2076
BC 2565x1
360.32.11
2703
2703
BC 2618
BCE 2840 B
BC 2572x1
BC 2816
BCE 2840 A
312.41.16 OX
BC 2815
2X BC 2943
BC 2571
2X 121.26.21 NI
2703
2X 303.41.16 OX
170.40.91 OX
331.43.13 OX
4X 105.26.16 CE
900.32.12
2X 312.72.14
BC 1136x1
BCM 2616
BC 614x1
BCM 2445x1
2755.1
2X 110.20.12 OX
2X BC 1162x1 M3
2755.1
BCM 2196
2X BC 2199
17.81.91.11
2X 150.26.16 OX

| | | | | |
|---|---|---|---|---|
| **H3**<br>EBM | 06.71 | ✳ | **E** | **1** |

## Upper Base Plate

1. Upper working plate

1.1 Sprockets (fig. 1)

Place sprockets (a) in raised position by means of tool BJ 1503 and slightly tighten one screw (b) in view of the adjustment of the automatic loading.

1.2 Loop formers (fig. 1)

Loosen the 2 screws (d) and bring lever (c) in open position of the loop formers.
Position and let the lower loop former (e) rest against the film gate and place the upper loop former (g) at short distance of the inclined plane of the film gate. Tighten screws (d).

1.3 Automatic loading (fig. 2)

Preparation as per fig. 2, camera mounted.
Disengage the motor clutch, set the lateral release button on M.
Operate the mechanism with the handcrank.
Load on a length of film previously cut with the built-in cutter.
The film must be guided by the loop former into a longitudinal position, so that the claw easily enters the film perforation. Adjust if necessary by modifying the angular position of the upper sprocket.
When guided by the lower loop former, the film must engage freely with the sprocket teeth without displacing the sprocket guide. Adjust if necessary by modifying the angular position of the lower sprocket.
Carry out several test loadings at a speed of 18 f./s.
The film must feed through the camera freely without jamming nor catching.
When the loop formers are open, the loops must keep their original shape, no matter whether the camera is operated in forward or reverse motion.

1.4 Sprocket guides (fig. 3)

Act with tool BJ 824 on the column of each sprocket guide so as to obtain a space of 2 film plies from the sprocket.

1.5 Spool axle (fig. 4)

The torque at the lower spool take-up spindle measured in forward motion at 18 f./s and of the upper spool axle measured in reverse motion on pulley BJ 1703 must be of :

$$\boxed{100^{+20}_{-40}\ \text{g}}$$

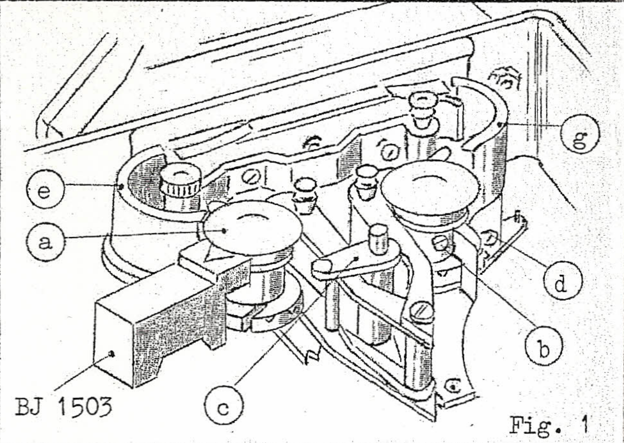


Fig. 1

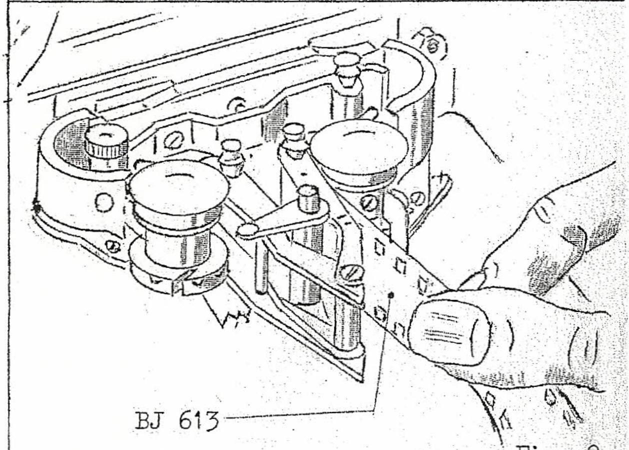


Fig. 2

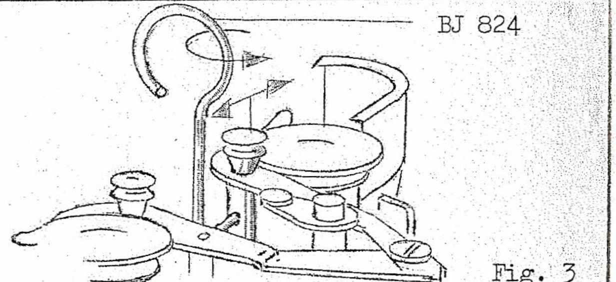


Fig. 3

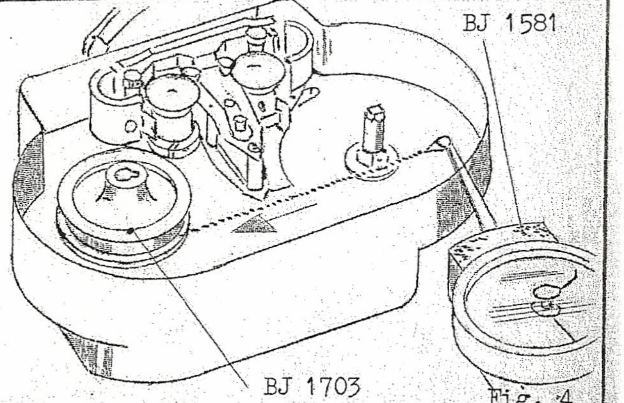


Fig. 4

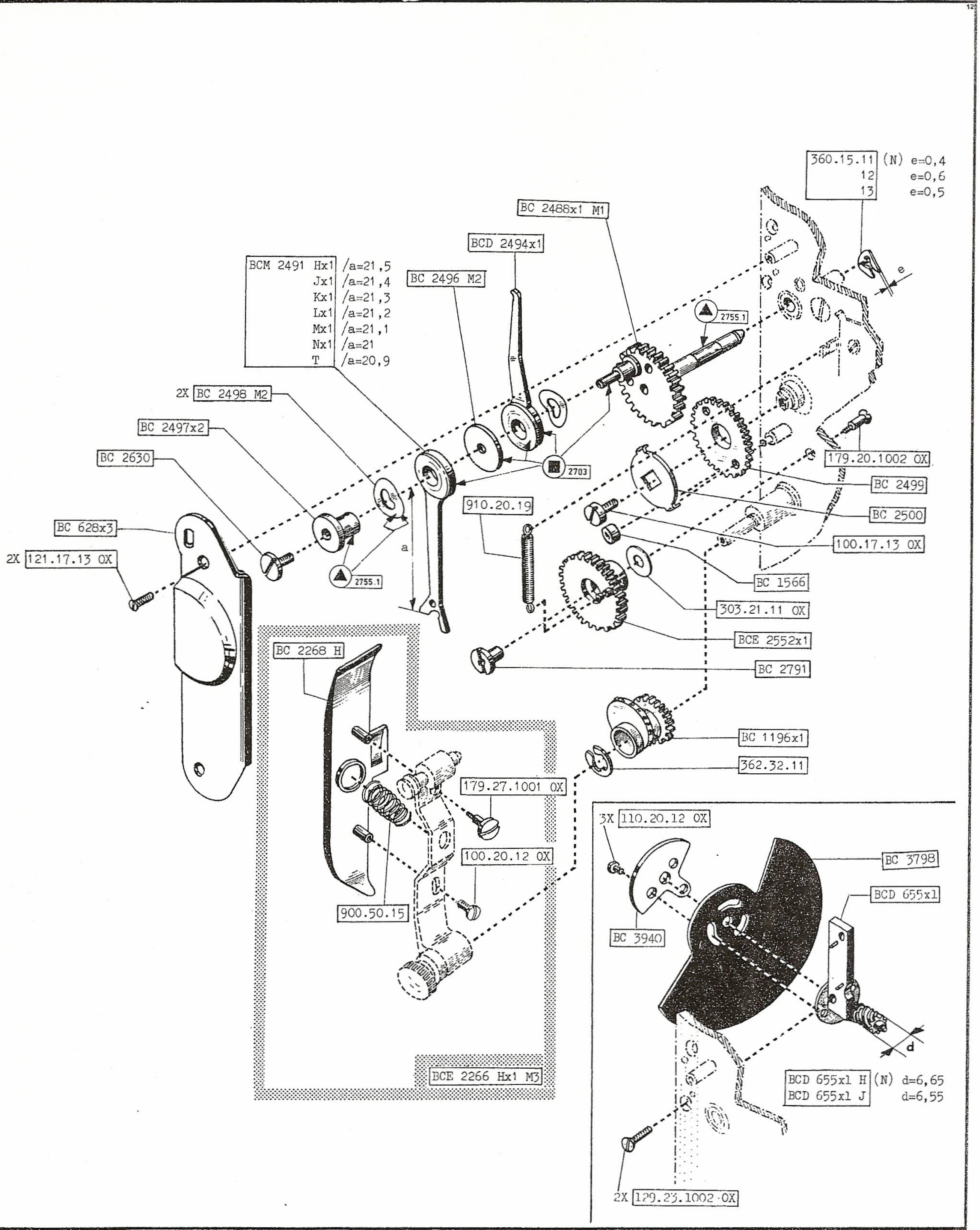
**PD**

Griffe Volet presseur
Greifer Filmandruckplatte
Claw Pressure pad

H16EBM

300 401 →

BOLEX


360.15.11 (N) e=0,4
12 e=0,6
13 e=0,5
e
BC 2488x1 M1
BCD 2494x1
BC 2496 M2
BCM 2491 Hx1 /a=21,5
Jx1 /a=21,4
Kx1 /a=21,3
Lx1 /a=21,2
Mx1 /a=21,1
Nx1 /a=21
T /a=20,9
2755.1
2X BC 2498 M2
BC 2497x2
BC 2630
BC 628x3
2X 121.17.13 OX
2755.1
a
2703
910.20.19
179.20.1002 OX
BC 2499
BC 2500
100.17.13 OX
BC 1566
303.21.11 OX
BCE 2552x1
BC 2791
BC 2268 H
179.27.1001 OX
100.20.12 OX
900.50.15
BCE 2266 Hx1 M3
BC 1196x1
362.32.11
3X 110.20.12 OX
BC 3798
BCD 655x1
BC 3940
d
BCD 655x1 H (N) d=6,65
BCD 655x1 J d=6,55
2X 129.23.1002 OX

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## Claw - Pressure Pad

### 1. Claw

#### 1.1 Adjusting the framing (fig. 1)

Insert the test pressure pad BJ 1514x1 in place of the normal pad.
Load the camera with a length of test film.
Light up the taking aperture from the outside.
Seen from the inside, the edges of the aperture must lie at equal distance from the middle of the perforation when the claw retracts.
In case of need, select the correct claw in order to achieve the adjustment.

#### 1.2 Friction torque of the claws on the film (fig. 2)

While refitting the claw assembly onto the eccentric axle, adjust the friction torque on the film by means of the spring washers and run in the assembly by operating the camera for about 10 times of the spring motor capacity.
Place the claw assembly on platform H16 of tool BJ 1572 M1.
Rotate the disk in the direction of the red or white arrow, depending on which of the forward or backward motion claw is checked, on which occasion these must rest against the feeler of the dynamometer.
The friction torque shown by the dynamometer must be of

$\boxed{11 \pm 2\ \text{g}}$

- for the forward motion claw, and

$\boxed{7 \pm 1\ \text{g}}$

- for the backward motion one.

This checking may also be carried out when the camera is mounted. For this purpose, remove the claw protection.
Disengage the mechanism so as to operate the camera with the handcrank for reverse motion.
Place tool BJ 1572 M1 onto the camera as per fig. 3, so that the feeler of the dynamometer lies :
- opposite the forward motion claw (a)
- opposite the backward motion claw (b).

This checking may be effected by simply rotating the dynamometer, so that the claw moves freely in front of the film gate.

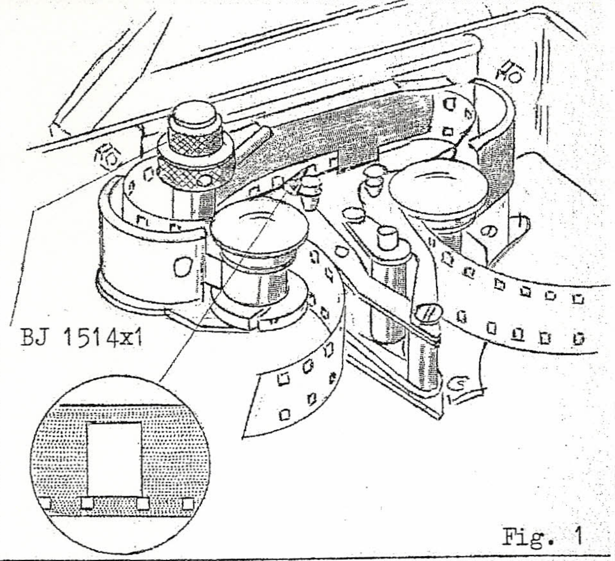


Fig. 1

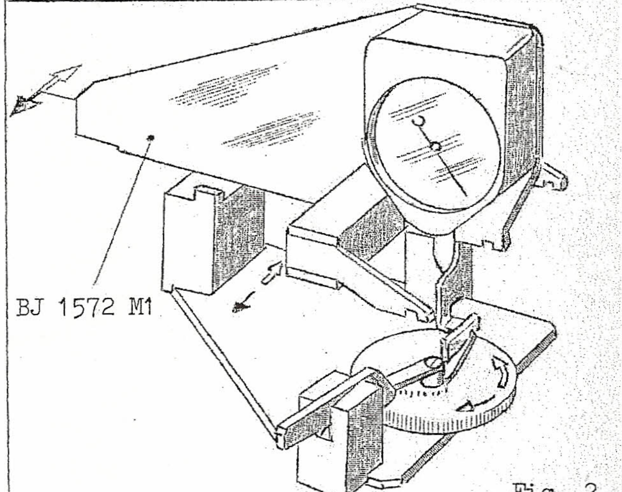


Fig. 2

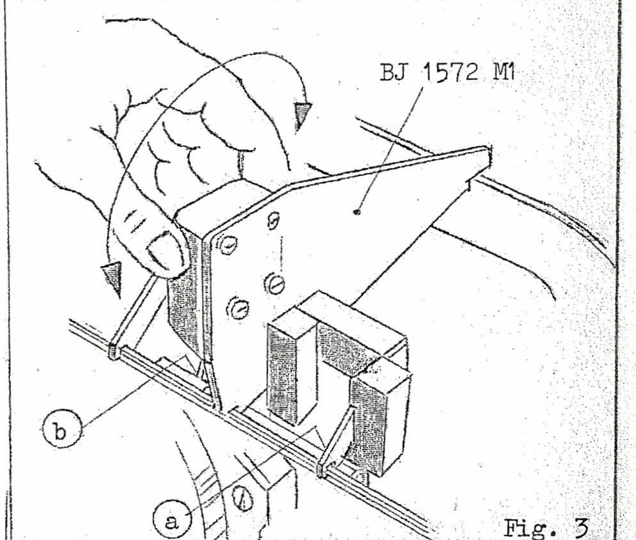


Fig. 3

1.3 Fastening the forward motion claw (fig. 4)

Install the eccentric shaft (c) and adjust the axial play to 0.05 mm.
Wind the spring motor a few turns and operate the camera through the frontal release knob.
Fit the nylon gear (a) and the washer with the square-shaped hole (b), making sure that the eccentric (c) is inclined as per sketch.
The angle displacement (d) must be of 1 tooth.

1.4 Lateral centering of the claws (fig. 5)

State of the camera as above.
Move screw (a) by means of a screwdriver until the eccentric axle gets in extreme right hand position.
Pull both claws backwards.
Insert gauge BJ 1121 between the lateral film guides into gate, so that edge (k) lies opposite the housing seam.
Center the tip of the forward motion claw by slightly twisting with tool BJ 1129, so that it runs for a full cycle in the calibrated slot (c) between points (e) and (f).
Similar centering of the backward motion claw between points (g) and (h) of calibrated slot (d).

1.5 Loop catcher (fig. 6)

Wind the spring motor a few turns and operate the camera through the frontal release knob.
Set loop former (l) on toothed wheel (m) at an angle of 15...45° which corresponds to 1 to 3 teeth of the toothing.
The loop catcher must move freely and reform a loop after 2 lost images.

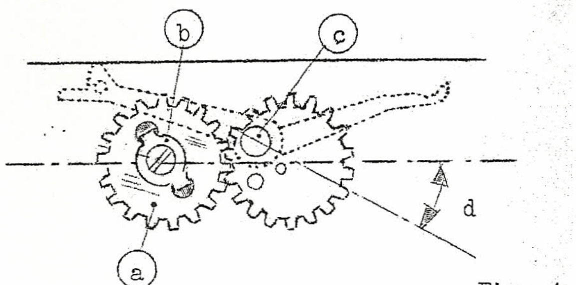


Fig. 4

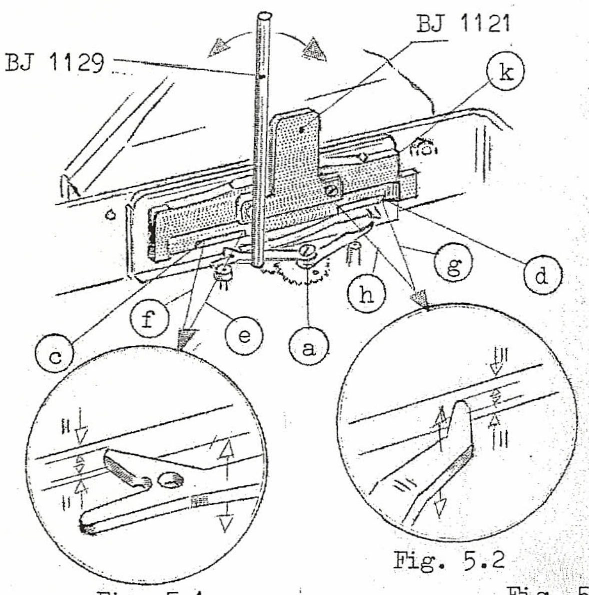


Fig. 5.1
Fig. 5.2
Fig. 5

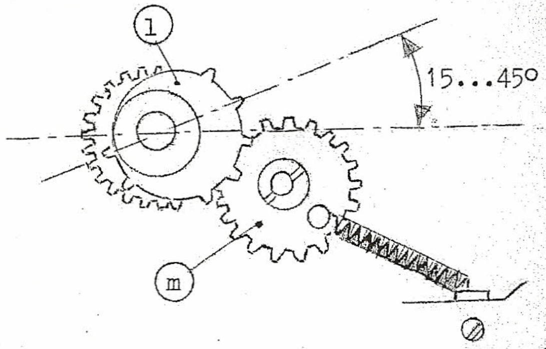


Fig. 6

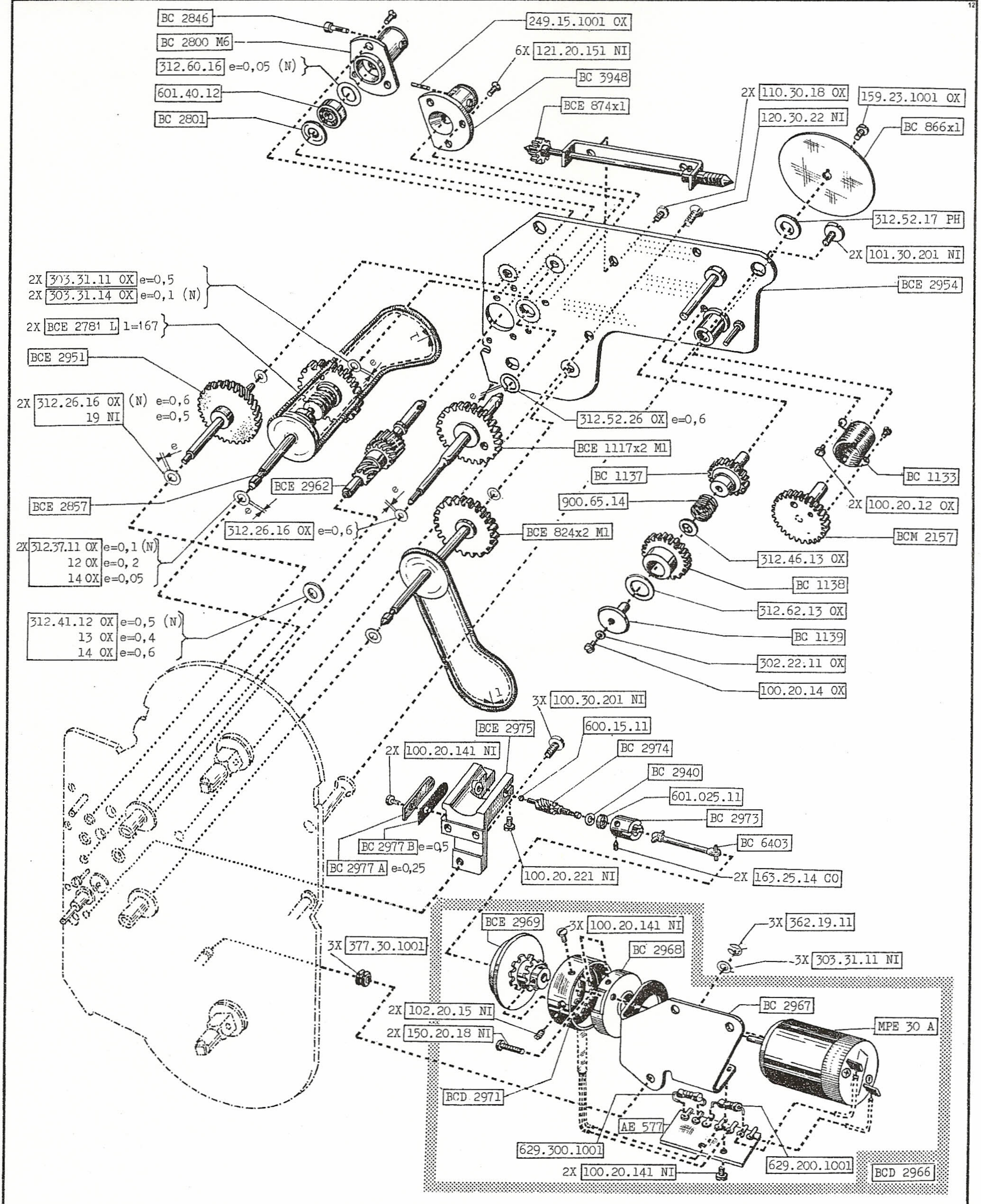
**PD**

# Mécanisme - Moteur
# Mechanismus-Motor
# Mechanism - Motor

H16EBM

300 401 ⟹

**BOLEX**


BC 2846
BC 2800 M6
312.60.16 e=0,05 (N)
601.40.12
BC 2801
249.15.1001 OX
6X 121.20.151 NI
BC 3948
BCE 874x1
2X 110.30.18 OX
120.30.22 NI
159.23.1001 OX
BC 866x1
312.52.17 PH
2X 101.30.201 NI
BCE 2954
2X 303.31.11 OX e=0,5
2X 303.31.14 OX e=0,1 (N)
2X BCE 2781 L l=167
BCE 2951
2X 312.26.16 OX (N) e=0,6
19 NI e=0,5
e
BCE 2857
BCE 2962
312.26.16 OX e=0,6
2X 312.37.11 OX e=0,1 (N)
12 OX e=0, 2
14 OX e=0,05
312.41.12 OX e=0,5 (N)
13 OX e=0,4
14 OX e=0,6
312.52.26 OX e=0,6
BCE 1117x2 M1
BC 1137
900.65.14
BCE 824x2 M1
BC 1133
2X 100.20.12 OX
BCM 2157
312.46.13 OX
BC 1138
312.62.13 OX
BC 1139
302.22.11 OX
100.20.14 OX
3X 100.30.201 NI
BCE 2975
600.15.11
BC 2974
2X 100.20.141 NI
BC 2940
601.025.11
BC 2973
BC 6403
BC 2977 B e=0,5
BC 2977 A e=0,25
100.20.221 NI
2X 163.25.14 CO
BCE 2969
3X 100.20.141 NI
BC 2968
3X 362.19.11
3X 303.31.11 NI
3X 377.30.1001
BC 2967
MPE 30 A
2X 102.20.15 NI
2X 150.20.18 NI
BCD 2971
AE 577
629.300.1001
629.200.1001
2X 100.20.141 NI
BCD 2966

**H3**
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(F) Tous les engrenages et pivots sont graissés avec
(D) Fetten aller Zahnräder und Stifte mit
(E) Grease all gears and pins with

▲ 2755.1

**G**

**1**

1. Separating the working plates

Prior to this operation, let the motor spring run down completely after having disengaged pinion (a) (fig. 3) which connects the spring motor to gear wheel (b).

2. Assembling the working plates

The various components of the complete drive mechanism are held in place by the upper and lower working plates. For the assembling, prepare :

- The upper working plate as per fig. 1, without speed governor.
- The lower working plate as per fig. 2, without the control axle of footage counter.
- Adjust the axial play to 0.05 mm by means of the necessary washers.
- Use hook BJ 1521 to connect the belt of the lower sprocket axle to the pulley of the lower spool axle.

3. Aligning the spring motor (fig. 3)

For this alignment, the mechanism must be completely assembled.

- Separate pinion (a) from gear wheel (b).
- Fully wind the spring motor and let it run down just one revolution.
- Hold the mechanism via the stopping axle.
- Turn gear wheel (b) fully home to the stop, direction as per arrow.
- Engage pinion (a) into gear wheel (b) and insert clip (d).
- Free the mechanism and check that the spring motor makes

8 revolutions

4. Clutch mechanism (fig. 4)

In the "engaged" position, the fork must be able to swivel freely.
In "disengaged" position, teeth (g) must separate completely from teeth (h).
Adjustment is to be done by slightly bending fork (e) in the appropriate direction by means of twister BJ 1502.

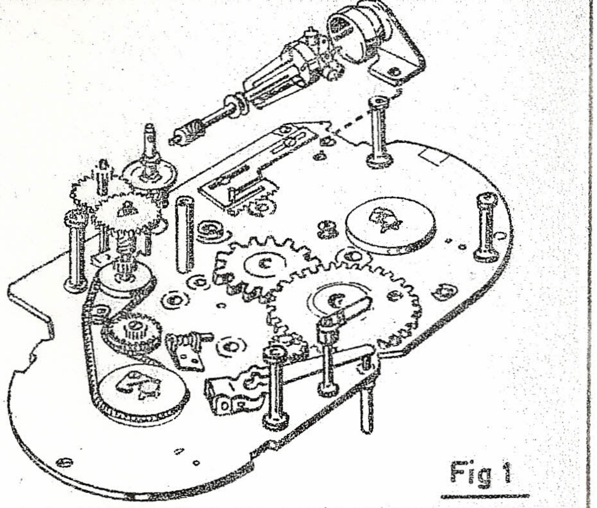


Fig 1

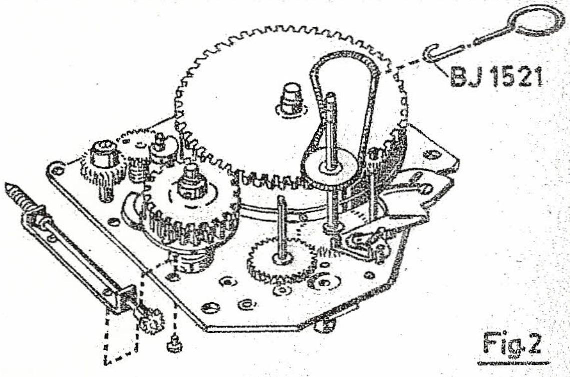


Fig.2

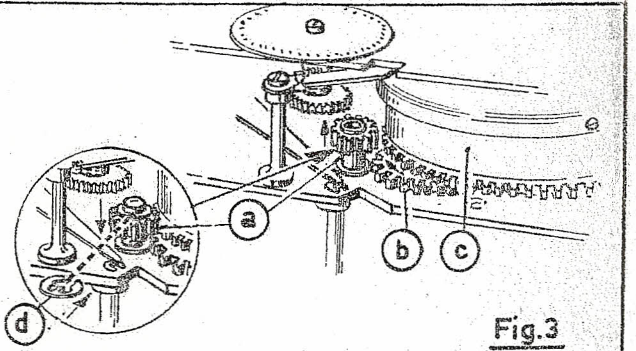


Fig.3

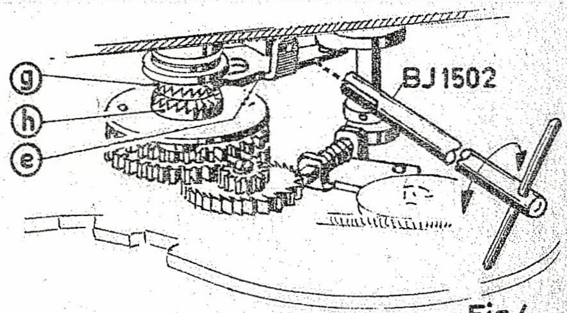


Fig.4

5. Resistant torque of the mechanism (fig. 5)

This measurement is to be carried out by means of pulley BJ 1508x1 placed on the handcrank axle with dynamometer BJ 703, as well as the claws retaining plate BJ 1568.
The maximum values accepted are as follows :
- mechanism complete without claw = 130 g
- mechanism complete with claw = 320 g
- camera complete = 320 g

6. Adjusting the speed

Preparation of the mechanism as per chapter 2, outside of the housing. To carry out the operation, adjust the governor drags in high position so as to reach the speed of 64 f./s on the stroboscop disk mounted on the handcrank axle, as per fig. 8.
Use tool BJ 1579 M1 for the adjustment with the file or with machine BJ 1109 which provides for the adjustment through dynamic milling.
See the corresponding IT sheet in catalogue OU.

Fig. 6

At the beginning of the adjustment, apply a very thin layer of Molykote powder BJ 1058 with a small brush on the drags at (g), as well as at the annular surface (h) of the bell.
Fit the governor into the camera, wind the spring motor fully and let it run down completely.
Repeat this 3 times at the highest came a speed. Having completed the adjustment of the running speed of 64 f./s, remove the governor and clean the annular surface of the bell at (h) with a soft cloth.
The Molykote powder must remain on the drags at (g).
Caution : The governors dry-lubricated with Molykote powder must on no account be oiled.

Fig. 7

Fit the governor into the camera.
- Adjust the speed 64 f./s with stop (o).
- Adjust the speed 12 f./s with stop (m).

7. Calibrating the speed setting knob (fig. 8)

On the complete camera loaded with a test film, place the respective stroboscop disk comprising both a minimum and a maximum scale, allowing the adjustment of the speed setting knob.
There are 3 engraved and 1 virgin speed knobs.

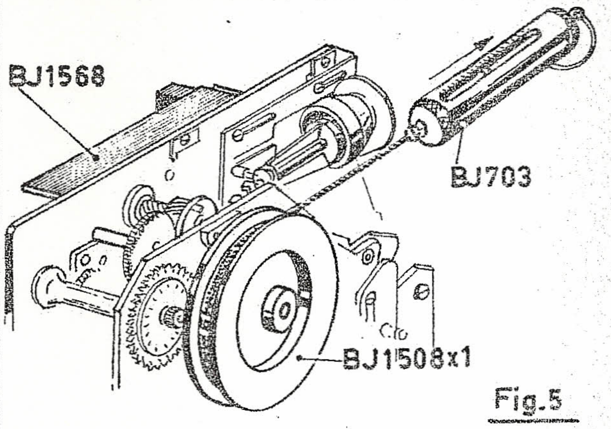


Fig.5

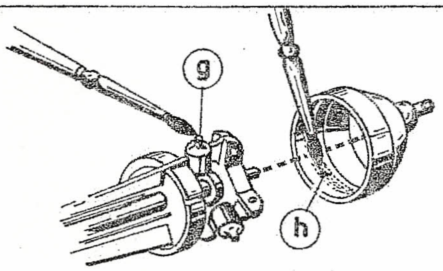


Fig.6

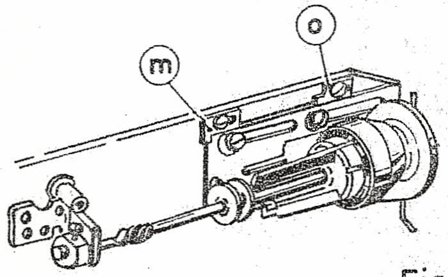
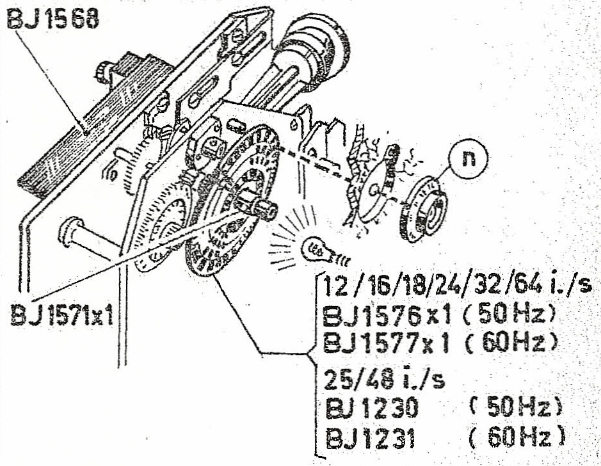


Fig.7



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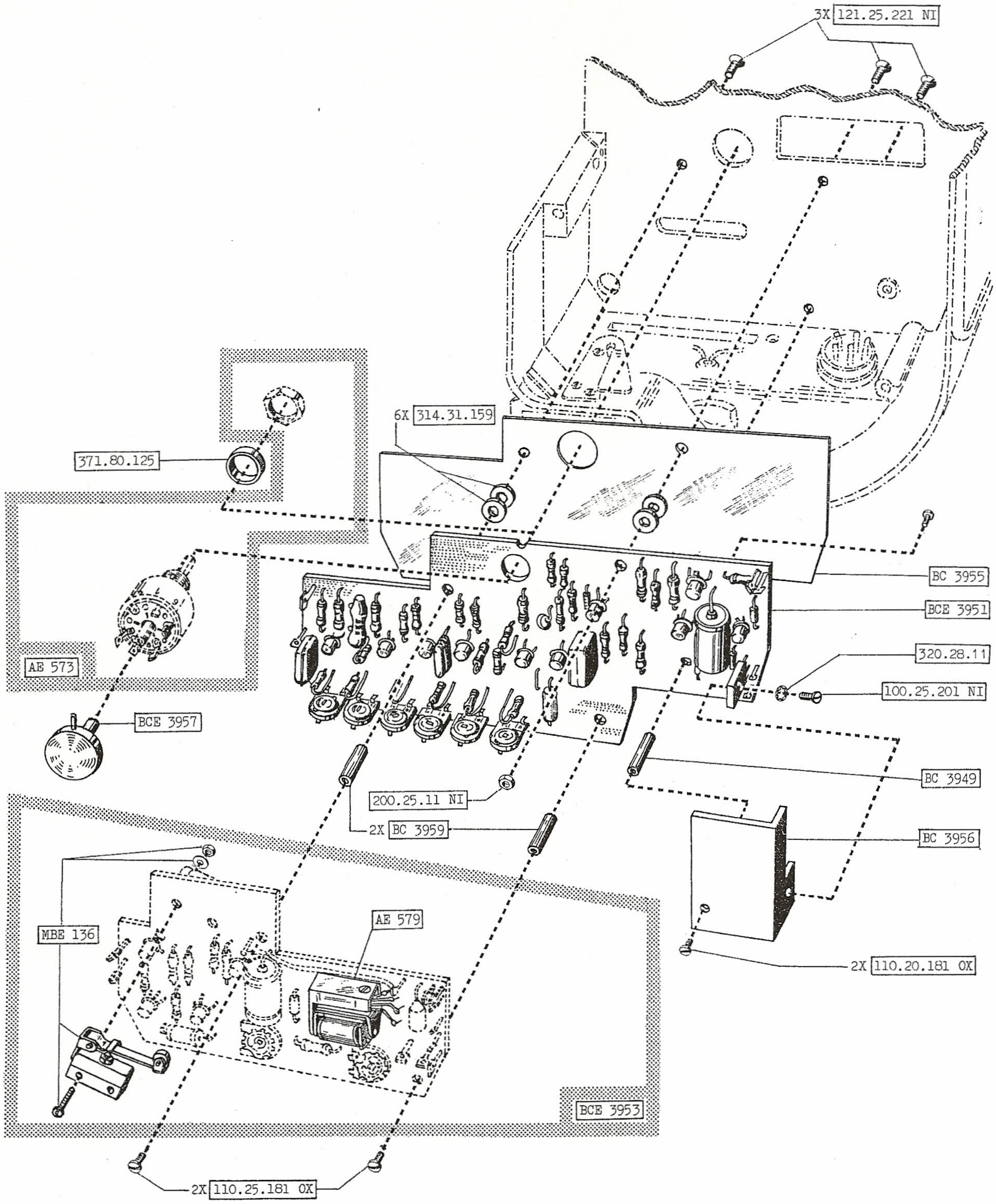
**PD**

# Circuits électroniques
# Elektronische Schaltungen
# Electronic circuits

H16EBM

300 401 →

BOLEX


3X 121.25.221 NI
6X 314.31.159
371.80.125
AE 573
BCE 3957
BC 3955
BCE 3951
320.28.11
100.25.201 NI
200.25.11 NI
2X BC 3959
BC 3949
BC 3956
2X 110.20.181 OX
MBE 136
AE 579
BCE 3953
2X 110.25.181 OX

# Lower Base Plate

1. Counter (fig. 1)

1.1 The footage counter is driven by the upper sprocket axle via the clutch control spindle (a).
Leave a slight play between the gears.
Load the counter recall spring by about one turn.
The counter automatically returns to zero when the camera is opened, and the m or ft mark must coincide with the line of the dial window.

1.2 The sound counter functions when arm (c) beats the screws of spring motor when lever (d) is positioned as shown on the sketch.

1.3 On the frame counter, the 100s disk (f) must be driven regularly and advance by one 50 frames mark for one turn of the unit disk (e), in whichever direction.

2. Release system

The release system controls :
- the intermittent operation
- the continuous running
- the frame-by-frame operation, snapshot and time exposures.

Check the functioning :
- of the front release button which must return to its original position assoon as finger pressure is relaxed
- of the lateral release button which remain caught in when it is set to position "M" and return to its original position when finger pressure is relaxed, when set to position "P".

3. Driving axles (fig. 2)

Use pincers BJ 1240 which matches with the shaft end into which the pin has to be fitted and allows the latter to be engaged without exerting any force on the 8:1 and 1:1 shafts.
- Pusher A for driving out the pins
- Pusher B for driving in the pins
- Pusher C for fitting and positioning the asymmetric pin on the 1:1 drive shaft.

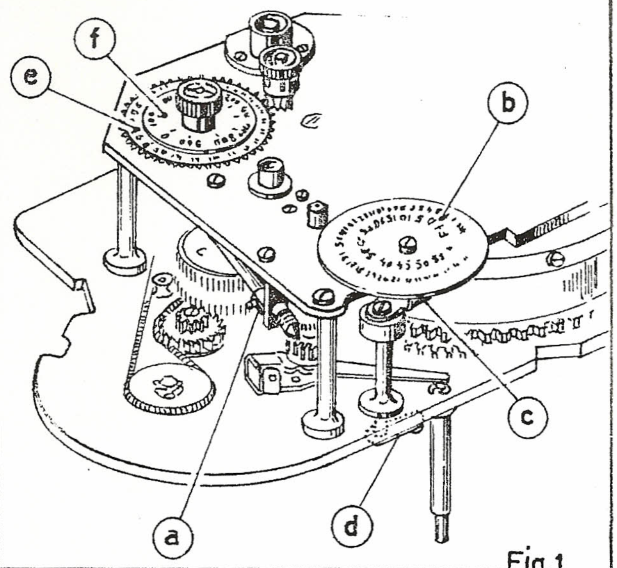


Fig.1

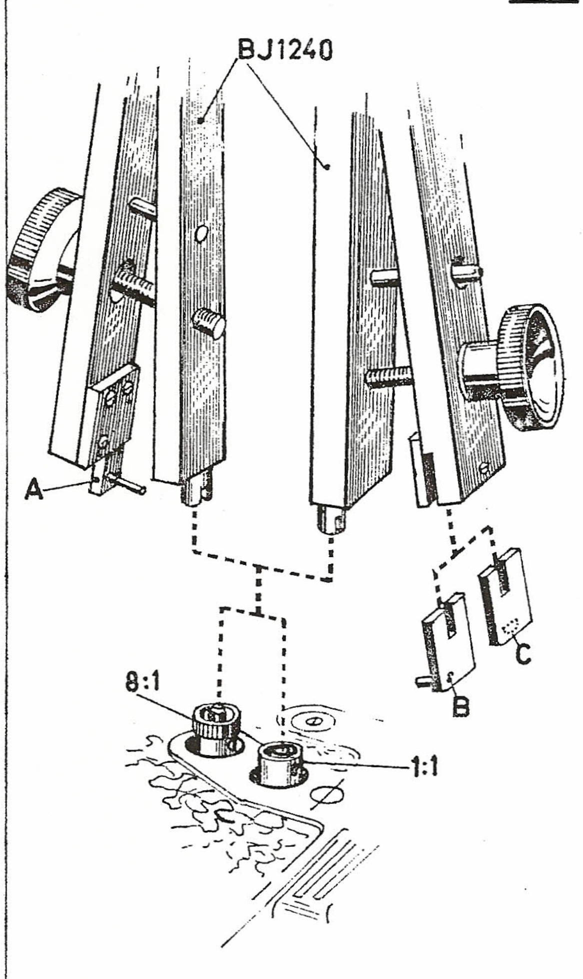


Fig.2

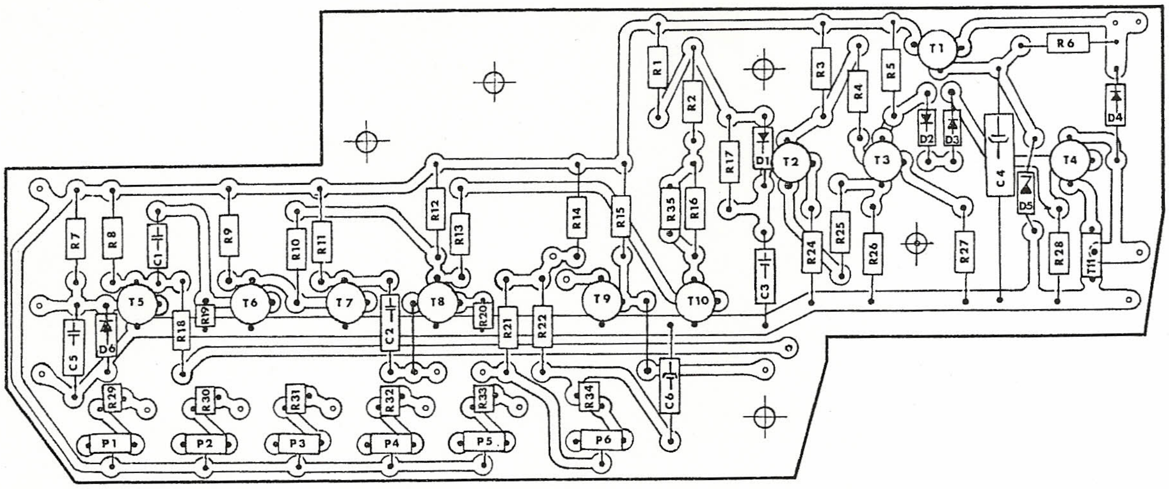
**PD**

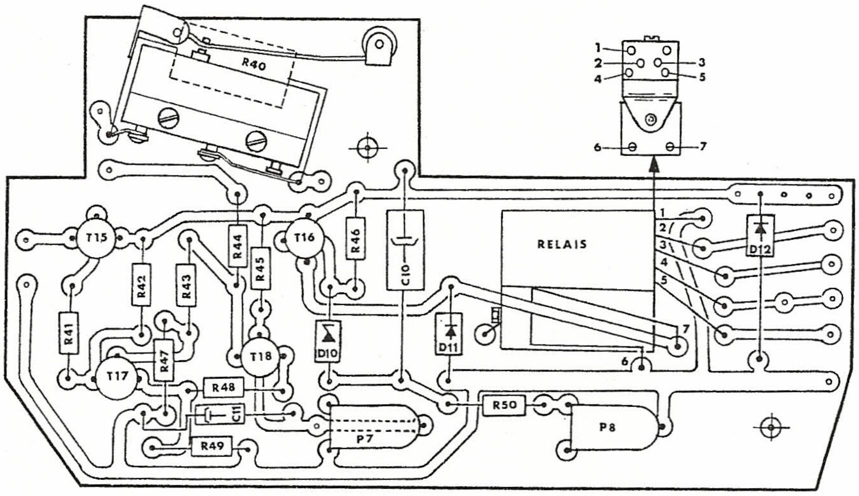
# Circuits électroniques
# Elektronische Schaltungen
# Electronic circuits

H16EBM

300 401 ⟹

BOLEX


R1
R2
R3
R4
R5
R6
T1
D2
D3
D4
R17
D1
T2
T3
C4
T4
D5
R35
R16
R24
R25
R26
R27
R28
T11
C3
R7
R8
C1
R9
R10
R11
R12
R13
R14
R15
T5
T6
T7
T8
T9
T10
C5
D6
R18
R19
C2
R20
R21
R22
C6
R29
R30
R31
R32
R33
R34
P1
P2
P3
P4
P5
P6

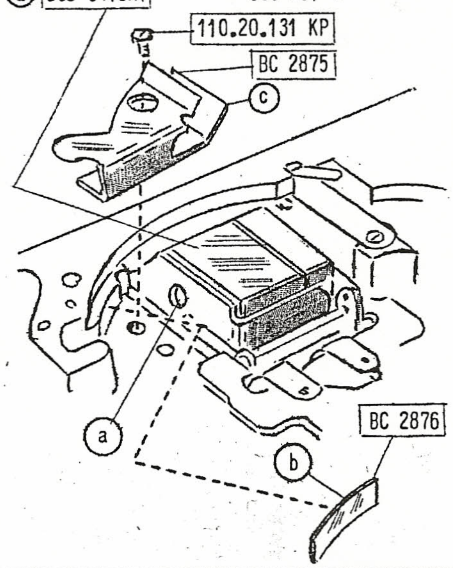

R40
1
2
4
3
5
6
7
RELAIS
T15
T16
R44
R45
R46
C10
D12
R42
R43
R41
T17
R47
T18
D10
D11
R48
C11
R49
R50
P7
P8

Composants électriques : Résistances
Elektrische Bestandteile : Widerstände
Electrical components : Resistors

Tolérance générale :
Allgemeine Toleranz :
General tolerance :
± 5 % * ± 10 %

| Valeur<br>Wert<br>Value<br>[Ω] | Puissance<br>Leistung<br>Power<br>[W] | No. de commande<br>Ersatzteil-Nr.<br>Part-No. | No.<br>Nr.<br>No. |
|---|---|---|---|
| 18 | 5,5 | 631.180.11 * | R 40 |
| 150 | 0,25 | 623.151.15 | R 49 |
| 150 | " | 639.151.1001 | R 35 |
| 270 | " | 623.271.15 | R 25-26-50 |
| 680 | " | 623.681.15 | R 6 |
| 820 | " | 623.821.15 | R 48 |
| 1 K | " | 623.102.15 | R 2-3-5-11-14-28 |
| 1,5 K | " | 623.151.15 | R 46 |
| 2,2 K | " | 623.222.15 | R 23 |
| 2,7 K | " | 623.272.15 | R 27-47 |
| 3,3 K | " | 623.332.15 | R 4 |
| 3,9 K | " | 623.392.15 | R 42-43-44 |
| 4,7 K | " | 623.472.15 | R 9-12-16 |
| 5,6 K | " | 623.562.15 | R 17 |
| 6,8 K | " | 623.682.15 | R 8 |
| 8,2 K | " | 623.822.15 | R 1 |
| 15 K | " | 623.153.15 | R 22-41 |
| 22 K | " | 623.223.15 | R 13-45 |
| 27 K | " | 623.273.15 | R 7-18 |
| 33 K | " | 623.333.15 | R 29 |
| 82 K | " | 623.823.15 * | R 20 |
| 100 K | " | 623.104.15 | R 19-24-30-31 |
| 120 K | " | 623.124.15 | R 34 |
| 150 K | " | 623.154.15 | R 32 |
| 220 K | " | 623.224.15 | R 10-21 |
| 330 K | " | 623.334.15 | R 15-33 |
| 2,2 K | - | 681.15.11 | P 8 |
| 4,7 K | - | 681.15.12 | P 7 |
| 25 K | - | 681.18.11 | P 1-2-3 |
| 50 K | - | 681.18.12 | P 4-5-6 |

|  |  |  |
|---|---|---|
| **FM** | Porte-objectif<br>Objektivhalter<br>Lens Holder | H16SB / SBM<br>300 001 → |

|  | Anciennes pièces<br>Alte Teile<br>Former parts | Nouvelles pièces<br>Neue Teile<br>New parts | Observations<br>Bemerkungen<br>Remarks |
|---|---|---|---|
| 1 |  | BCD 3509 M a=6,85 (N) | (F) Engrenage supplémentaire d'un taillage plus grand.<br>(D) Zusätzliches Zahnrad mit grösserer Zahnform.<br>(E) Additional gear wheel with bigger tooth formation.<br>05.71 |
| 2 | ① (BCM 3419x1 M2 †) | ② BCD 3419x1 300 251 →  | (F) Le trou de lumière sur le porte-prisme en (a) est supprimé, retour à l'ancien prisme. Introduction d'un réflecteur autocollant (b) et d'un réflecteur guide-lumière (c).<br>(D) Die Lichtöffnung an (a) auf der Prismenfassung ist aufgehoben, woher die Verwendung des älteren Prismas. Einführung eines selbstklebenden Reflektors (b) sowie eines Lichtführungs-Reflektors (c).<br>(E) The light aperture (a) on the prism mount is eliminated, hence the use of the old prism. Introduction of a self-sealing reflector (b) as well as of a light guiding reflector (c).<br>05.71 |
| 3 | 3X (110.20.141 KP †) | 3X 110.20.131 KP | (F) Nomenclature modifiée<br>(D) Teilnummernänderung<br>(E) Part-number modification<br>05.71 |

|  |  |  |  |  |
|---|---|---|---|---|
| H3 | 05.71 | * | PD - A - 1 - 11.70 | 1 |

| | | | |
|---|---|---|---|
| **FM** | Griffe volet presseur<br>Greifer Filmandruckplatte<br>Claw Pressure pad | H16<br>251 501 → | Bolex paillard |

| | **Anciennes pièces**<br>**Alte Teile**<br>**Former parts** | **Nouvelles pièces**<br>**Neue Teile**<br>**New parts** | **Observations**<br>**Bemerkungen**<br>**Remarks** |
|---|---|---|---|
| 1 | ▲ ~~2755.1~~ | ▨ 2703 No. 254 001 → | (F) Modification du graissage des frictions des griffes marche avant et arrière, la graisse 2755.1 est remplacée par l'huile 2703.<br>(D) Aenderung des Schmiermittels für den Vorder- bzw. Ruckwärtsgreifer. Fett 2755.1 wird durch Oel 2703 ersetzt.<br>(E) Lubrification of forward and backward motion claws modified : grease 2755.1 replaced by oil 2703.<br>06.71 |

| | | | | |
|---|---|---|---|---|
| H3 | 06.71 | ✳ | PD - F - 1 - 01.71 | 1 |

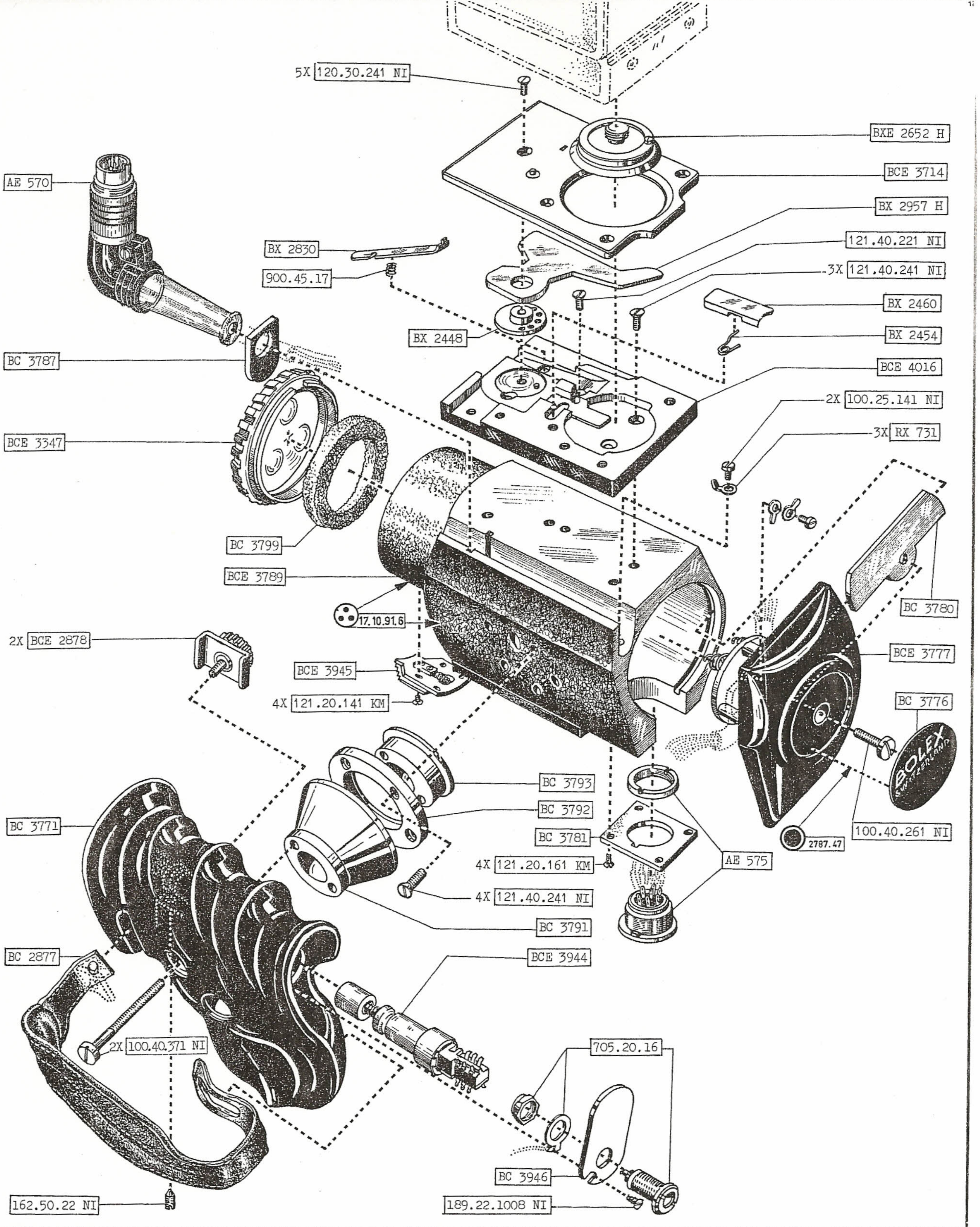
## Condensateurs - Kondensatoren - Capacitors

| Valeur<br>Wert<br>Value<br>[F] | Tension de service<br>Betriebsspannung<br>Operating voltage<br>[V] | No. de commande<br>Ersatzteil-Nr.<br>Part-No. | No.<br>Nr.<br>No. | Tolérances<br>Toleranzen<br>Tolerances |
|---|---|---|---|---|
| 2,2 n | 500 | 651.222.500 | C1 | ± 20 % |
| 10 n | 250 | 649.103.1001 | C2 | ± 10 % |
| 220 n | | 648.224.11 | C5 | |
| 680 n | 63 | 648.684.12 | C3 | ± 20 % |
| 6,8 µ | 6 | 653.685.06 | C6 | ± 20 % |
| 20 µ | 16 | 661.206.016 | C11 | +50 -10 % |
| 200 µ | 10 | 661.207.010 | C4 - 10 | +50 -10 % |

## Diodes/Transistors - Dioden/Transistoren - Diodes/Transistors

| Type<br>Typ<br>Type | No. de commande<br>Ersatzteil-Nr.<br>Part-No. | No.<br>Nr.<br>No. |
|---|---|---|
| 1 N 4148 | 693.001.106 | D 1-2-3-6 |
| 1 N 4003 | 693.002.101 | D 4-11 |
| 20 A 1 | 693.002.107 | D 12 |
| ZF 6,2 | 693.003.107 | D 10 |
| ZF 6,8 | 693.003.124 | D 5 |
| BC 108 B | 693.015.118 | T 1-2-3-4-6-7-9-10-17-18 |
| BC 109 B | 693.015.108 | T 5-8 |
| BC 179 B | 693.015.117 | T 15-16 |
| 2 N 5190 | 693.016.104 | T 11 |

| | | | |
|---|---|---|---|
| **PD** | Poignée<br>Handgriff<br>Grip | H16EBM<br>300 401 ⟶ | **BOLEX** |


5X 120.30.241 NI
BXE 2652 H
BCE 3714
BX 2957 H
121.40.221 NI
3X 121.40.241 NI
BX 2460
BX 2454
BCE 4016
2X 100.25.141 NI
3X RX 731
AE 570
BX 2830
900.45.17
BX 2448
BC 3787
BCE 3347
BC 3799
BCE 3789
17.10.91.6
2X BCE 2878
BCE 3945
4X 121.20.141 KM
BC 3780
BCE 3777
BC 3776
BOLEX SWITZERLAND
2787.47
100.40.261 NI
BC 3793
BC 3792
BC 3781
4X 121.20.161 KM
4X 121.40.241 NI
BC 3791
AE 575
BC 3771
BCE 3944
BC 2877
2X 100.40.371 NI
705.20.16
BC 3946
162.50.22 NI
189.22.1008 NI

| | | | | | |
|---|---|---|---|---|---|
| **H3**<br>EBM | 06.71 | ✳ | | **J** | **1** |

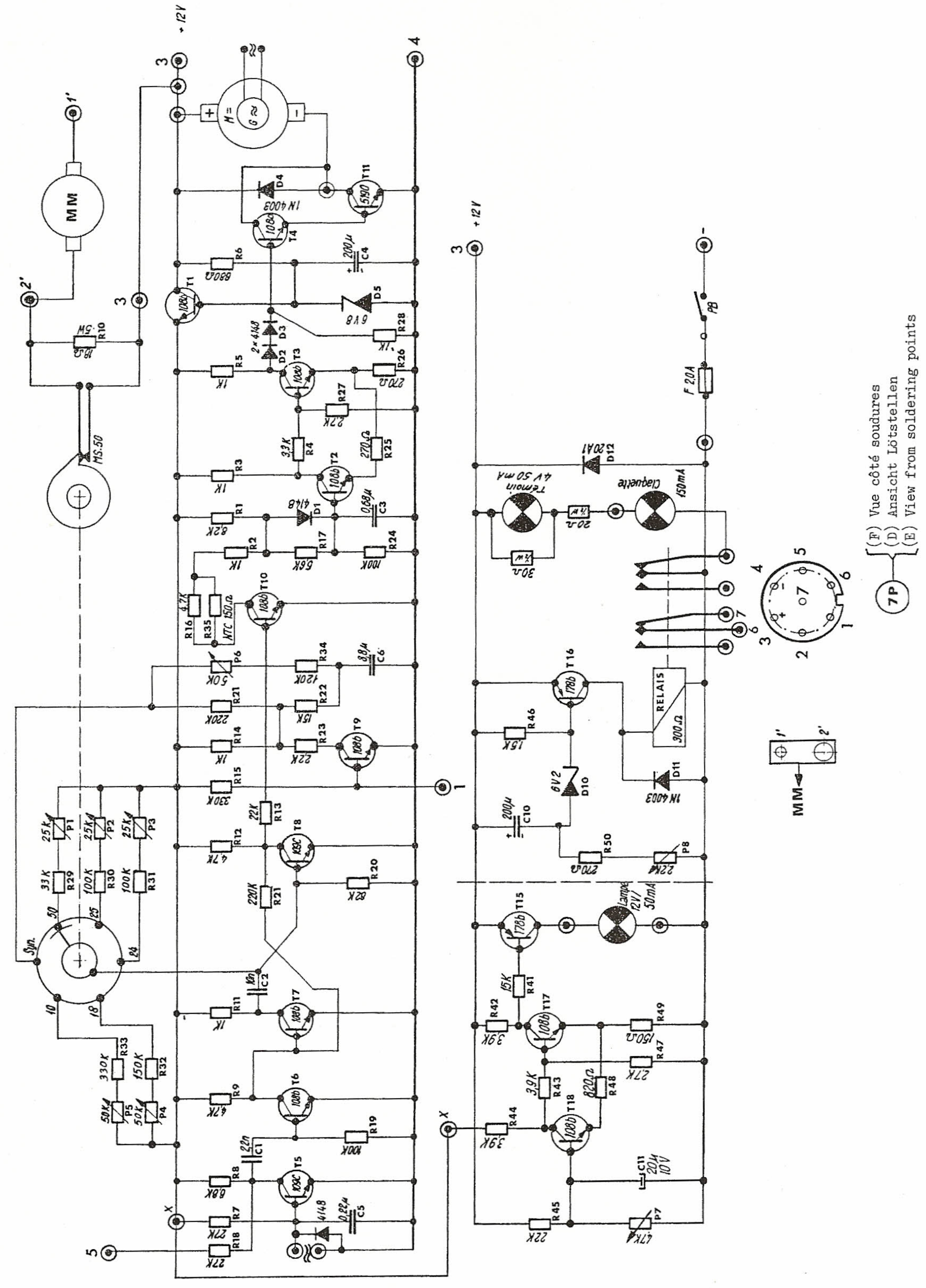
**PD**

# Schéma électrique
# Elektrisches Schema
# Electric diagram

**H16EBM**

300 401

**BOLEX**



+12V
3
4
1'
2'
MM
R10 15Ω .5W
MS.50
M= G≈
D4 1N4003
T4 108
T11 5190
T1 108b
R6 880Ω
C4 200µ
D5 6V8
R28 1K
D2 D3 2×4148
T3 108b
R5 1K
R26 270Ω
R27 22K
R4 33K
R25 270Ω
T2 108b
R3 1K
R1 8,2K
D1 4148
C3 0,68µ
R2 1K
R17 56K
R24 100K
R16 4,7K
R35 HTC 150Ω
T10 108b
P6 50K
R34 120K
C6 8,8µ
R21 220K
R22 15K
R14 1K
R23 22K
T9 108b
R15 330K
R13 22K
T8 109C
R12 4,7K
R21 220K
R20 82K
P1 25K
P2 25K
P3 25K
R29 33K
R30 100K
R31 100K
Syn.
50
25
24
10
18
C2 10n
R11 1K
T7 108b
R33 330K
R32 150K
P5 50K
P4 50K
R9 4,7K
T6 108b
R19 100K
C1 22n
R8 6,8K
T5 109C
4148
C5 0,22µ
R7 27K
R18 27K
X
5
PB
F 20A
D12 20A1
Témoin 4V 50mA
30Ω
20Ω
Claquette 150mA
T16 178b
R46 15K
RELAIS 300Ω
D10 6V2
D11 1N4003
C10 200µ
R50 270Ω
P8 22K
T15 178b
lampe 12V 50mA
R41 15K
R42 3,9K
T17 108b
R49 150Ω
R47 27K
R43 3,9K
R48 820Ω
T18 108b
R44 39K
C11 20µ 10V
R45 22K
P7 47K
1 2 3 4 5 6 7
7P
(F) Vue côté soudures
(D) Ansicht Lötstellen
(E) View from soldering points
MM

**H3**
EBM

06.71

*

**K**

**1**

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**IT**

# Multifocalviewfinder

H 16

251'501 →

**BOLEX**

## 1. Assembling the viewfinder

### 1.1 Fitting the guide rail (fig. 1)

When mounted on the viewfinder, disk (a) must be aligned so that number 50 becomes visible and has a central position which may be obtained by displacing guide rail (b). Tighten screws (c).

### 1.2 Fitting the fixed lens element (fig. 2)

Place tool BJ 1607 and the long gauge into guide rail (b) with a view to positioning the fixed lens element (d) and its support with respect to the front lens element (e).
Progressively tighten screws (g) and precautionously maintain lens element (d) against the gauge.

### 1.3 Fitting the mobile lens element (fig. 3)

Turn disk (a) to position 50.
Place tool BJ 1607 and the short gauge H16 onto guide rail (b) with a view to positioning the mobile lens element (h) and its support with respect to the front lens element (e).
Progressively tighten screws (g) and precautionously maintain lens element (d) against the gauge.

## 2. Adjusting the viewfinder on the camera (fig. 4)

- Mount the camera on a steady support in front of a test chart, for instance BJ 159, at a distance of 1.50 m from the film plane.
- Equip the camera with a 75 mm tele lens and focus on the shart.
- Center the taking aperture axis with respect to an horizontal axis which must be at a distance of :

| | |
|---|---|
| X = 41 mm | for cameras with turret holder |
| X = 73 mm | for cameras with bayonet mount |

On the right-hand side from the viewfinder axis for the adaptation of the multifocal viewfinder on cameras with bayonet mount, the special intermediary support should be used in consequence of the dimention of the lens holder.

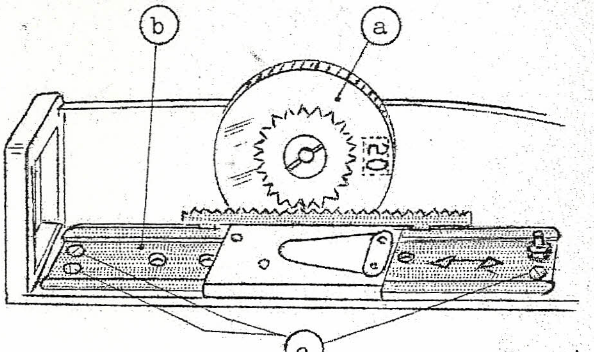

Fig. 1

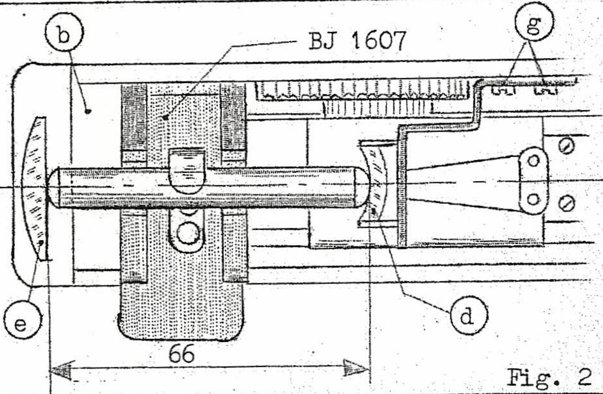

Fig. 2

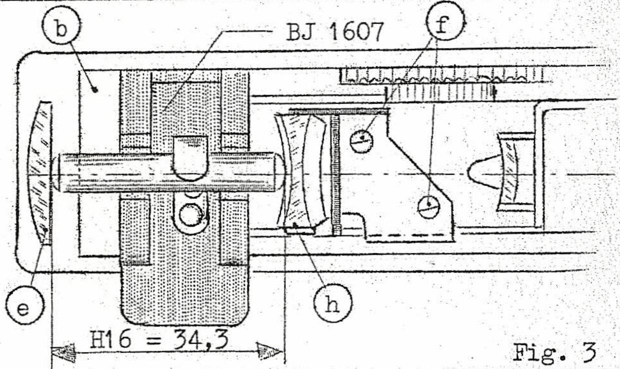

Fig. 3

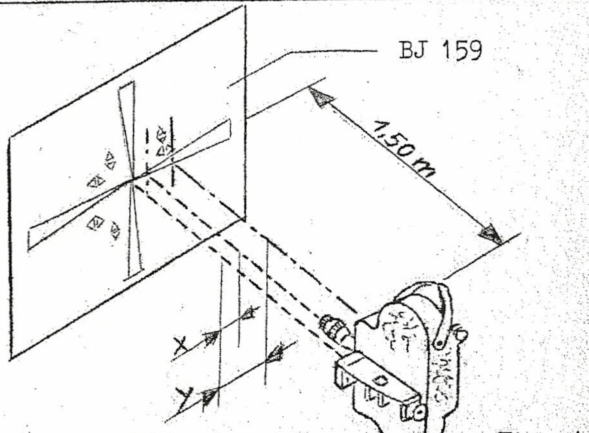

Fig. 4

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2.1 Vertical adjustment (fig. 5)

Set disk (a) of the viewfinder to focal length 75 mm. By slightly loosening screws (k), which can be attained through the 2 holes in the guide rail, the rear part of the viewfinder may be moved vertically so that the horizontal marks (l) visible in the viewfinder coincide with the horizontal axis. Yellow horizontal axis on test chart BJ 159.
Check the alignment at the various focal lengths of the viewfinder.

2.2 Horizontal adjustment (fig. 6)

The inclination of the viewfinder with respect to the horizontal plane consists in setting the viewfinder on infinity, position given by screw (n) resting against rivet (o).
Loosen the locking nut and turn screw (n) with tool BJ 1517 so as to obtain the correct centering of the vertical marks (m) visible in the viewfinder with respect to the vertical axis. Yellow vertical axis on test chart BJ 159.
Check the alignment at the various focal lengths of the viewfinder.

2.3 Adjusting the parallax correcting ring (fig. 7)

Fit the viewfinder cover.
Mount the viewfinder on the camera lid, turn the milled knob (r) fully to the right-hand side and align the graduated ring (s), the infinity mark being opposite the line engraved on the lid.
When the viewfinder is fitted to the camera by means of the intermediary support, use the corresponding graduated ring (blue).

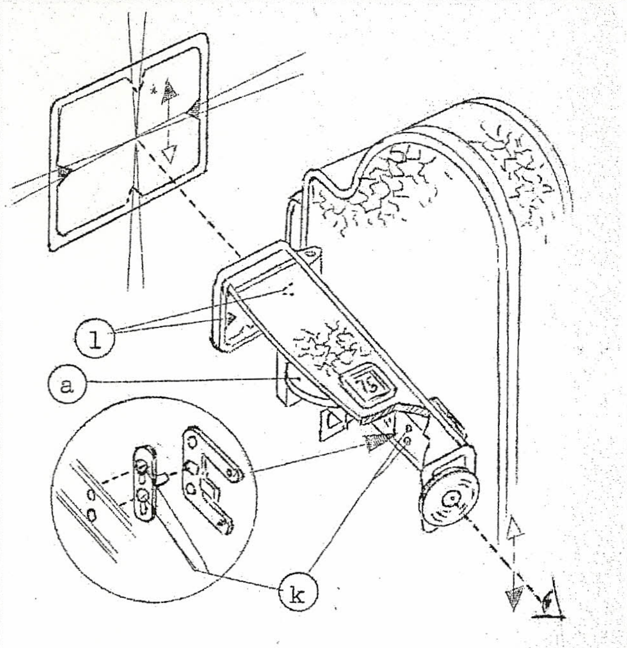


Fig. 5

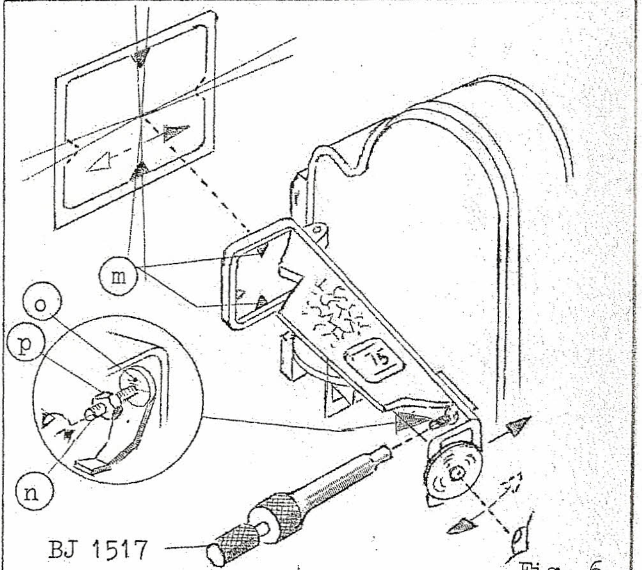


Fig. 6

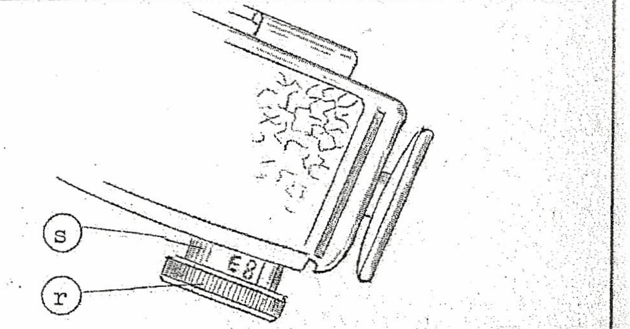


Fig. 7

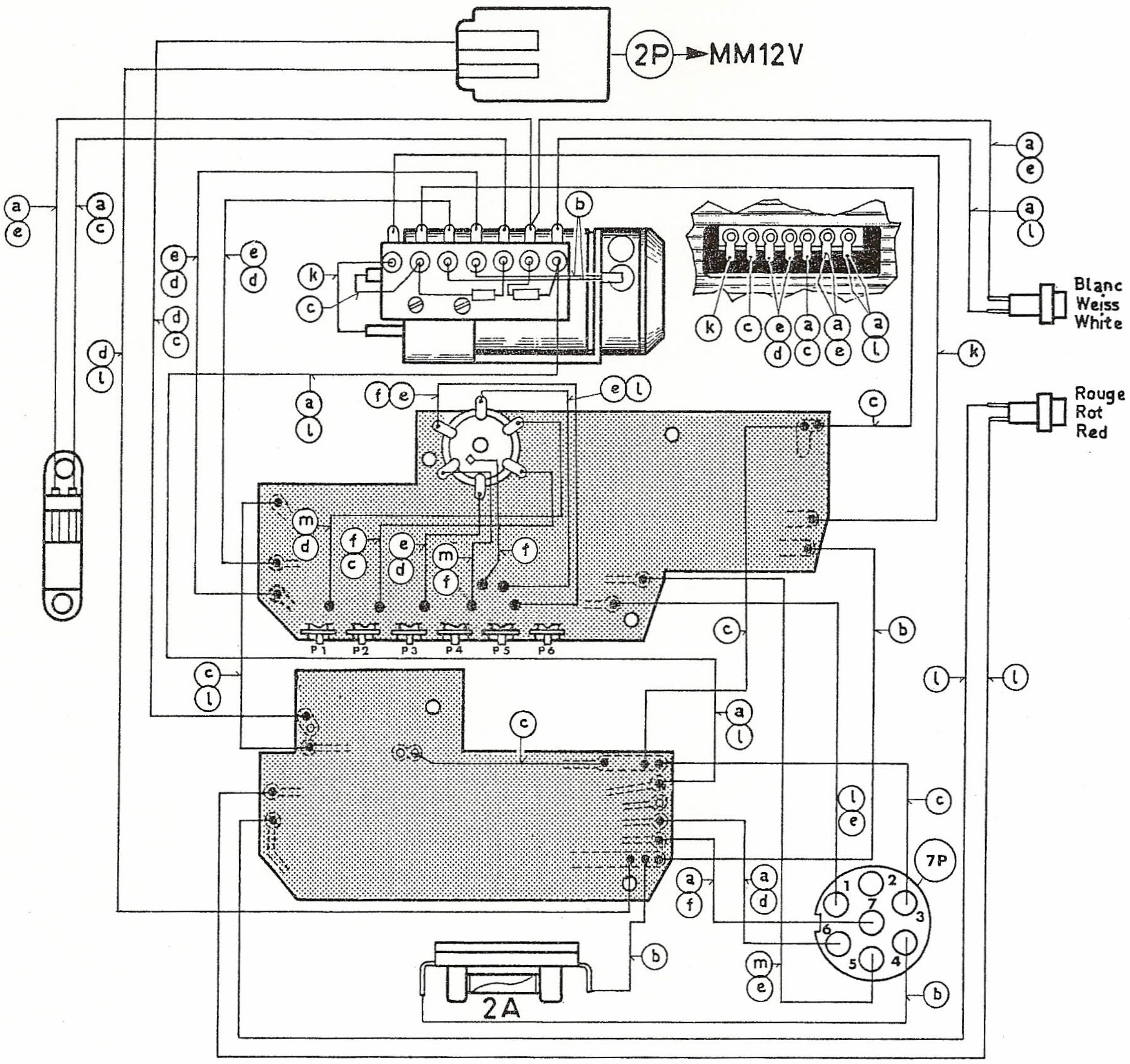
**PD**

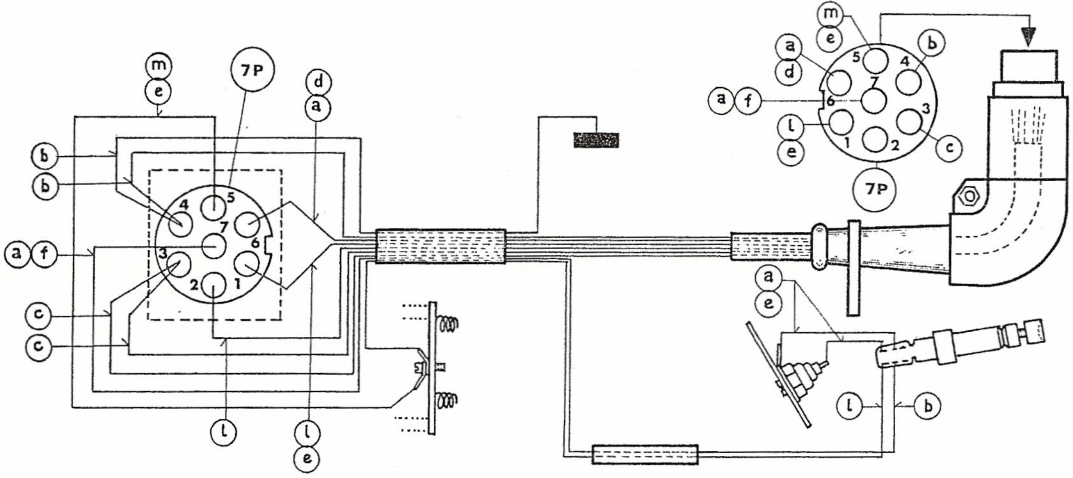
# Plan de câblage
# Verdrahtungsschema
# Wiring Diagram

**H16EBM**

300 401 ⟹

**BOLEX**


2P
MM12V
Blanc
Weiss
White
Rouge
Rot
Red
P1
P2
P3
P4
P5
P6
7P
1
2
3
4
5
6
7
2A


7P
1
2
3
4
5
6
7
7P
1
2
3
4
5
6
7

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**H3**
EBM

06.71

✳

7P
(F) Vue côté soudures
(D) Ansicht Lötstellen
(E) View from soldering points

**L** **1**

# IT

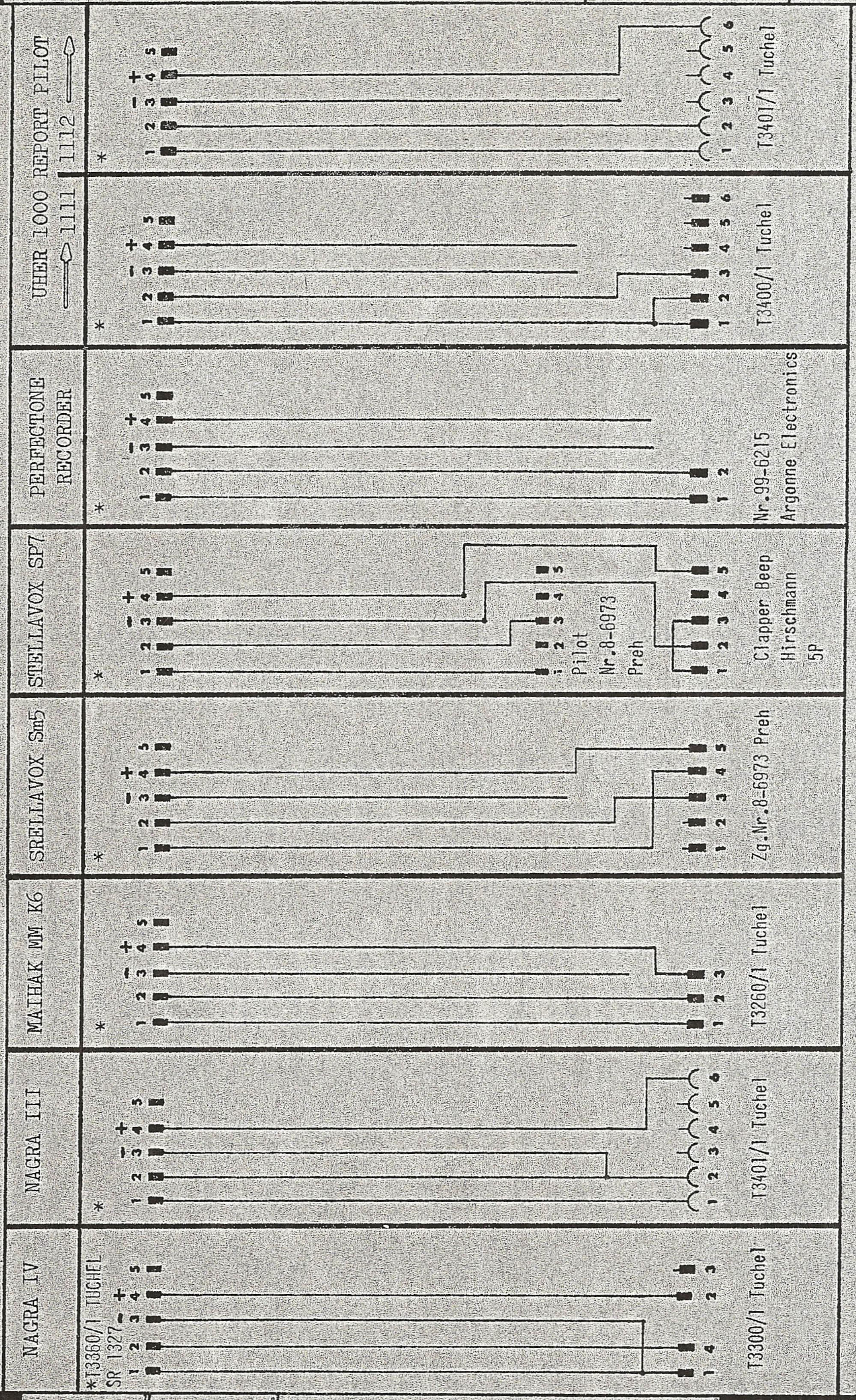
# Accessoires
# Zubehör
# Accessories

H16EBM
H16...+ESM

BOLEX

* SOSPI

| | | | |
|---|---|---|---|
| 1 | Rose | / pink | / Rosa |
| 2 | Vert pâle | / pale green | / Hellgrün |
| 3 | Vert | / green | / Grün |
| 4 | Rouge | / red | / Rot |
| 5 | | | |



NAGRA IV
*T3360/1 TUCHEL
SR 1327
T3300/1 Tuchel
NAGRA III
T3401/1 Tuchel
MATHAK MM K6
T3260/1 Tuchel
SRELLAVOX Sm5
Zg.Nr.8-6973 Preh
STELLAVOX SP7
Pilot
Nr.8-6973
Preh
Clapper Beep
Hirschmann
5P
PERFECTONE RECORDER
Nr.99-6215
Argonne Electronics
UHER 1000 REPORT PILOT
1111
1112
T3400/1 Tuchel
T3401/1 Tuchel
*
1 2 3 4 5
− +

Liaisons Son-pilote → Magnétophones
Verbindungen Pilotton → Tonbandgeräte
Connections sync pulse → tape recorders

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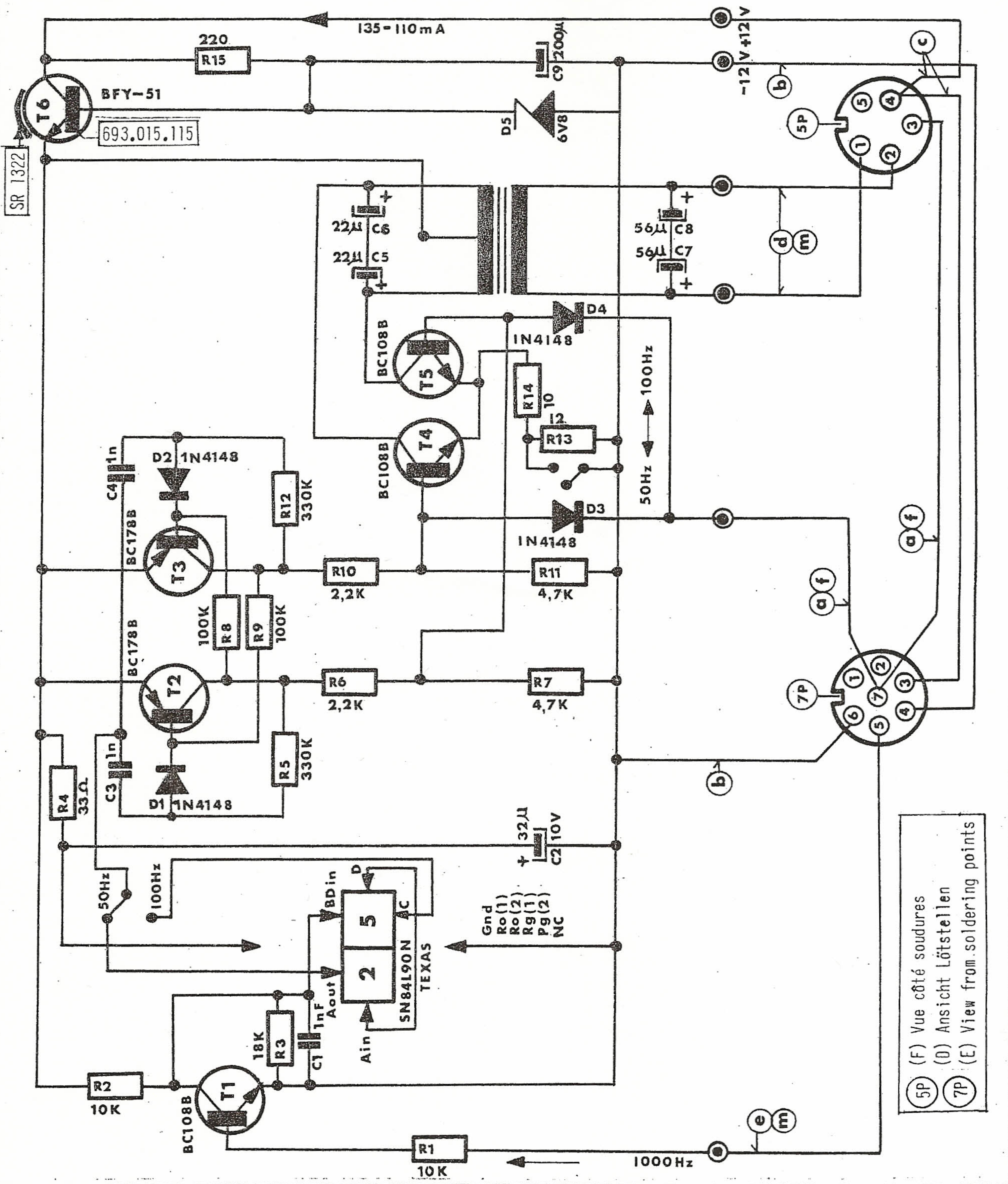
**PD**

# Accessoires
# Zubehör
# Accessories

H16EBM
H16...+ESM

**BOLEX**

| | | | | |
|---|---|---|---|---|
| Equipement son pilote | 25 i/s | 50 Hz | SOLOT | Schéma électrique |
| Pilottonausrüstung | 25 B/s | 50 Hz | SOLOT | Elektrisches Schema |
| Sync-pulse equipment | 25 f/s | 50 Hz | SOLOT | Electric diagram |



135-110mA
-12V +12V
220
R15
C9 200µ
BFY-51
T6
693.015.115
SR 1322
D5
6V8
b
c
5P
1
2
3
4
5
22µ C6
22µ C5
56µ C8
56µ C7
d
m
D4
1N4148
BC108B
T5
R14
10
12
R13
100Hz
50Hz
T4
BC108B
D3
1N4148
C4 1n
D2 1N4148
R12 330K
BC178B
T3
R10 2,2K
R11 4,7K
a f
100K R8
R9 100K
BC178B
T2
R6 2,2K
R7 4,7K
7P
6
7
C3 1n
D1 1N4148
R5 330K
R4 33Ω
32µ
C2 10V
50Hz
100Hz
BD in
D
AC
5
2
SN84L90N
TEXAS
Gnd
Ro(1)
Ro(2)
Rg(1)
Pg(2)
NC
1nF
Aout
Ain
C1
18K
R3
R2 10K
T1
BC108B
e
m
R1 10K
1000Hz
5P (F) Vue côté soudures
(D) Ansicht Lötstellen
7P (E) View from soldering points

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**H3**
EBM

11.72

*

**M**

**2**

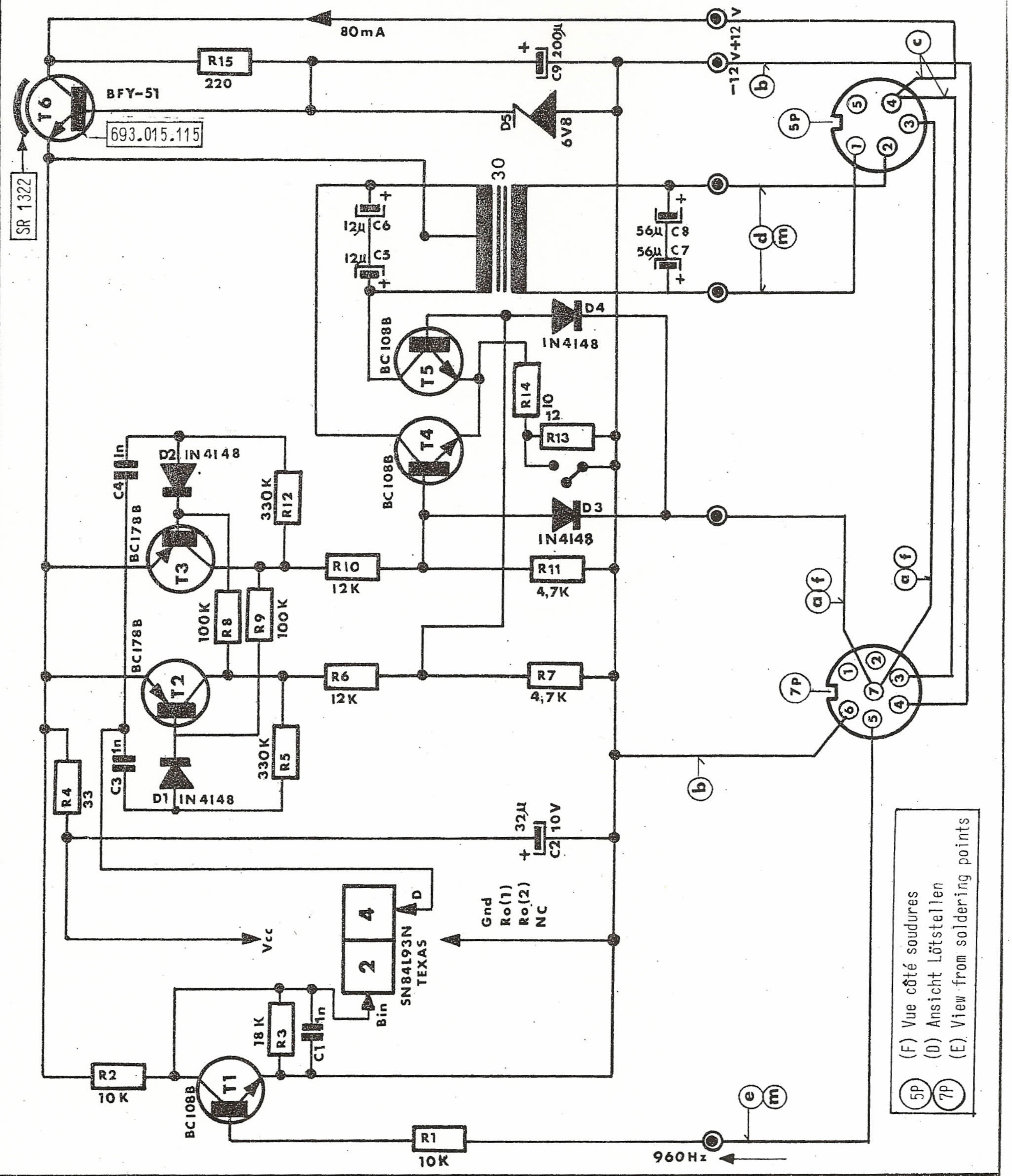
**PD**

# Accessoires
# Zubehör
# Accessories

H16EBM
H16...+ESM

**BOLEX**

| | | | | |
|---|---|---|---|---|
| Equipement son pilote | 24 i/s | 60 Hz | SOLTO | Schéma électrique |
| Pilottonausrüstung | 24 B/s | 60 Hz | SOLTO | Elektrisches Schema |
| Sync-pulse equipment | 24 f/s | 60 Hz | SOLTO | Electric diagram |

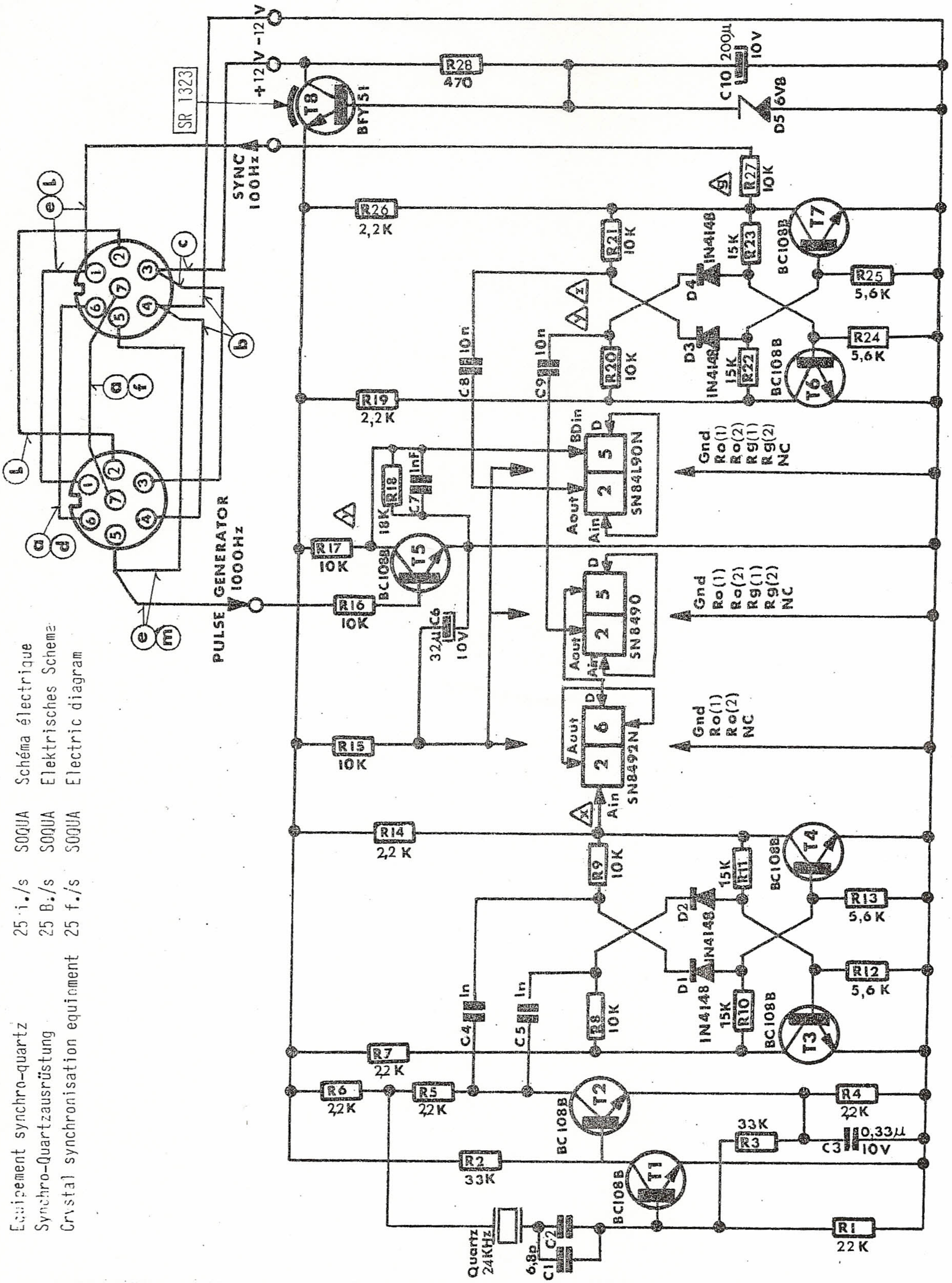

80mA
R15
220
+
C9 200µ
−12V
+12V
T6
BFY-51
693.015.115
SR 1322
D5
6V8
c
b
5P
1
2
3
4
5
30
+
12µ C6
12µ C5
+
+
56µ C8
56µ C7
+
d
m
D4
IN4148
BC108B
T5
R14
10
12
R13
T4
BC108B
D3
IN4148
C4 1n
D2 IN4148
BC178B
T3
330K
R12
R10
12K
R11
4,7K
a f
a f
100K
R8
R9
100K
BC178B
T2
R6
12K
R7
4,7K
7P
1
2
3
4
5
6
7
C3 1n
D1 IN4148
330K
R5
R4
33
b
32µ
+
C2 10V
D
4
2
SN84193N
TEXAS
Bin
Vcc
Gnd
Ro(1)
Ro(2)
NC
18K
R3
C1 1n
R2
10K
T1
BC108B
R1
10K
e
m
960Hz
5P (F) Vue côté soudures
7P (D) Ansicht Lötstellen
(E) View from soldering points

**PD**

# Accessoires
# Zubehör
# Accessories

H16 EBM
H16... +ESM

**BOLEX**



+12V
-12V
SR 1323
T8
BFY51
R28
470
C10 200µ 10V
D5 6V8
SYNC 100Hz
R27 10K
R26 2,2K
R21 10K
D4 1N4148
R23 15K
T7 BC108B
R25 5,6K
C8 10n
C9 10n
R20 10K
D3 1N4148
R22 15K
T6 BC108B
R24 5,6K
R19 2,2K
BDin
D
SN84L90N
Aout
Ain
Gnd
Ro(1)
Ro(2)
Rg(1)
Rg(2)
NC
R18 18K
C7 1nF
R17 10K
T5 BC108B
PULSE GENERATOR 1000Hz
R16 10K
C6 32µ 10V
SN8490
R15 10K
SN8492N
R14 2,2K
R9 10K
R11 15K
T4 BC108B
D2 1N4148
R13 5,6K
C4 1n
C5 1n
R8 10K
D1 1N4148
R10 15K
T3 BC108B
R12 5,6K
R7 2,2K
R6 2,2K
R5 2,2K
T2 BC108B
R4 2,2K
R3 33K
C3 0,33µ 10V
R2 33K
T1 BC108B
Quartz 24KHz
C1 6,8p
C2
R1 22K
a
b
c
d
e
f
l
m

| | | | |
|---|---|---|---|
| Equipement synchro-quartz | 25 i./s | SOQUA | Schéma électrique |
| Synchro-Quartzausrüstung | 25 B./s | SOQUA | Elektrisches Schema |
| Crystal synchronisation equipment | 25 f./s | SOQUA | Electric diagram |

**H3**
EBM

11.72

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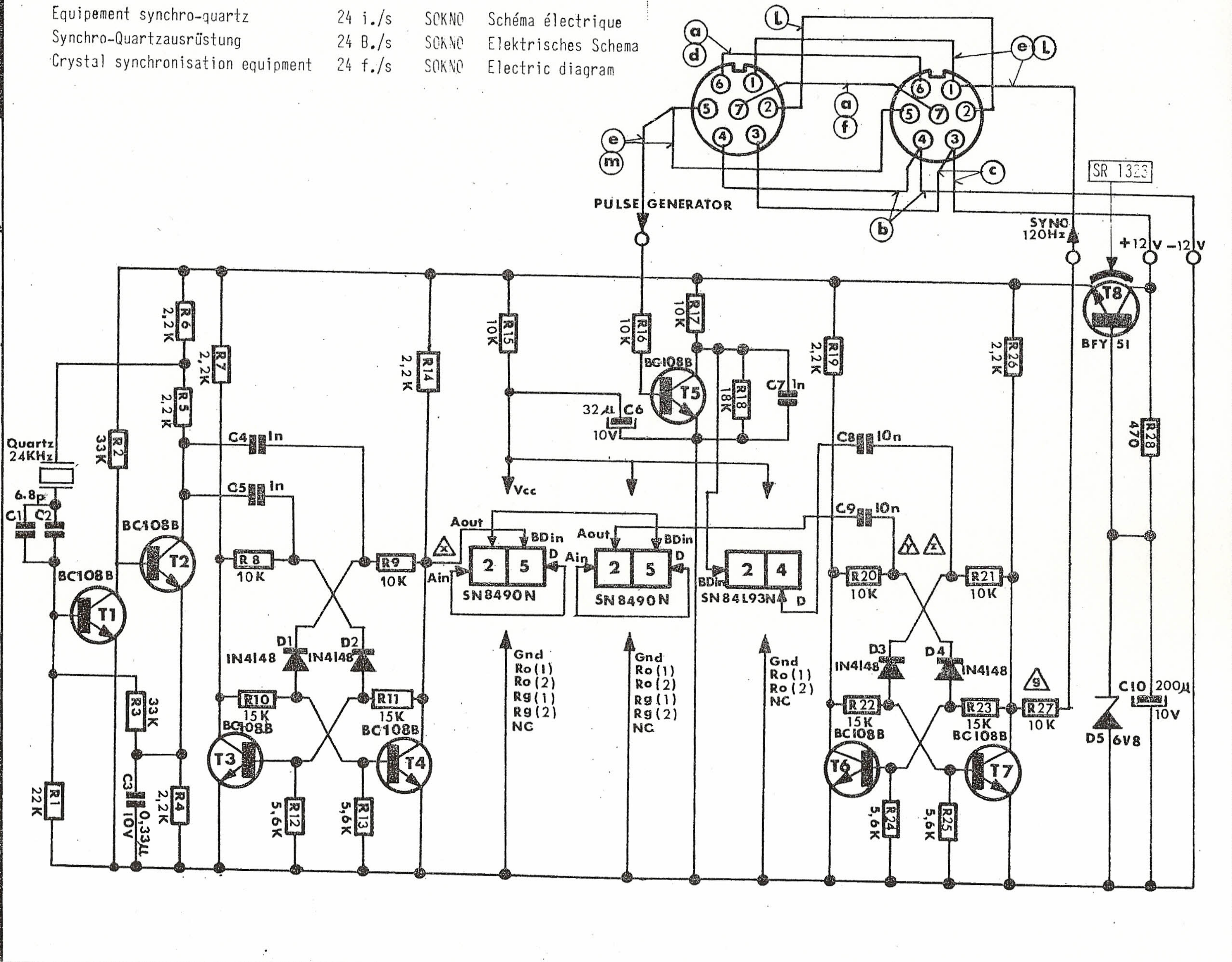
**M** **4**

| | | | |
|---|---|---|---|
| Equipement synchro-quartz | 24 i./s | SOKNO | Schéma électrique |
| Synchro-Quartzausrüstung | 24 B./s | SOKNO | Elektrisches Schema |
| Crystal synchronisation equipment | 24 f./s | SOKNO | Electric diagram |


a
d
e
m
L
e L
a
f
b
c
1
2
3
4
5
6
7
PULSE GENERATOR
SR 1323
SYNO 120Hz
+12V
-12V
T8
BFY 51
R28
470
C10 200µ 10V
D5 6V8
R27 10K
g
R26 2,2K
R21 10K
R20 10K
D3
D4
IN4148
IN4148
R22 15K
R23 15K
BC108B
BC108B
T6
T7
R24 5,6K
R25 5,6K
R19 2,2K
C8 10n
C9 10n
Y
Z
R17 10K
R16 10K
R18 18K
C7 1n
T5
BC108B
C6 32µ 10V
R15 10K
Vcc
Aout
BDin
D
Ain
2
5
SN8490N
Aout
BDin
D
Ain
2
5
SN8490N
BDin
2
4
SN84L93N
D
Gnd
Ro(1)
Ro(2)
Rg(1)
Rg(2)
NC
Gnd
Ro(1)
Ro(2)
Rg(1)
Rg(2)
NC
Gnd
Ro(1)
Ro(2)
NC
X
R14 2,2K
R9 10K
R8 10K
C4 1n
C5 1n
D1
D2
IN4148
IN4148
R10 15K
R11 15K
BC108B
BC108B
T3
T4
R12 5,6K
R13 5,6K
R7 2,2K
R6 2,2K
R5 2,2K
T2
BC108B
R2 33K
Quartz 24KHz
6.8p
C1
C2
T1
BC108B
R3 33K
C3 0,33µ 10V
R4 2,2K
R1 22K